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*For The Commodore*

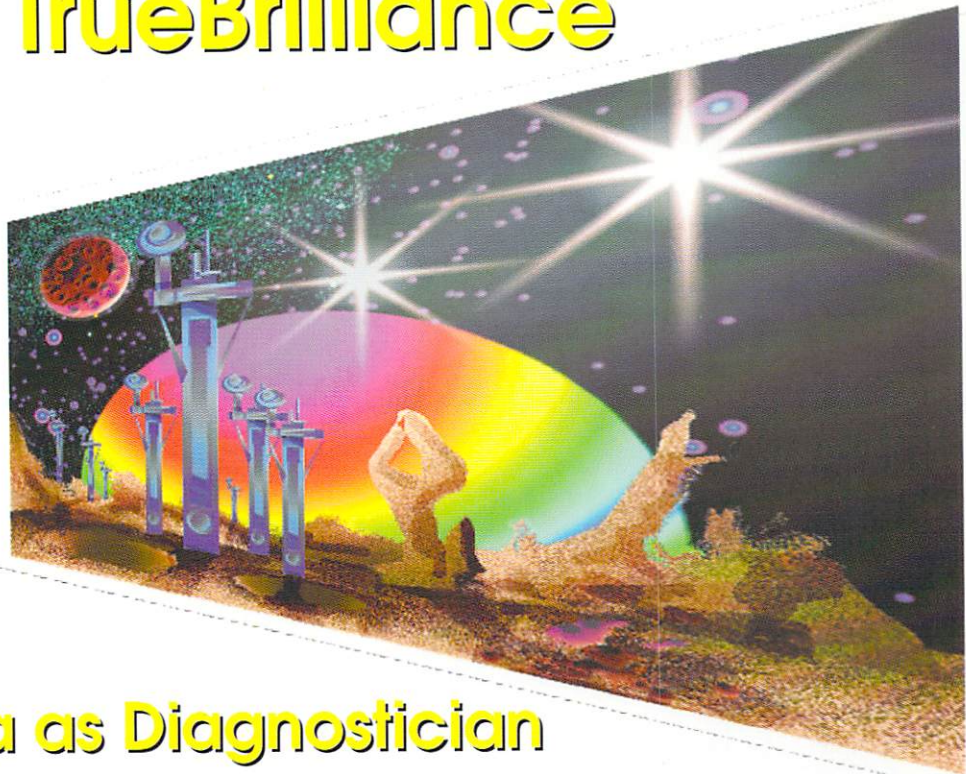
**AMIGA®**

Volume 10 No. 11 November 1995  
US \$3.95 Canada \$5.95

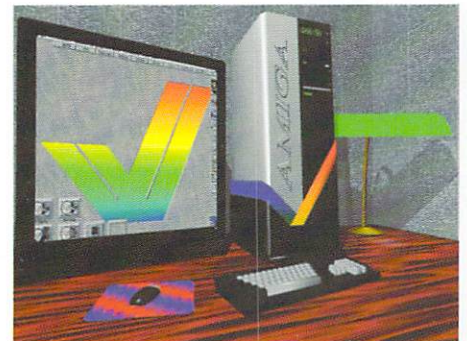
## Creating Universes With TrueBrilliance

- FinalCalc
- Labyrinth
- ShapeShifter
- Family  
Connections
- ChestNet

—The Amiga as Diagnostician



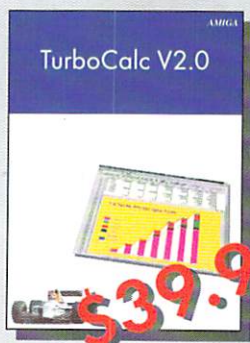
**Design  
Your Own  
Amiga**





## TurboCalc V2.0

TurboCalc V2.0 is the unique software solution that defines a new standard for spread sheet applications on the Commodore Amiga. Experience its nearly unlimited capabilities in all relevant categories:



### Macros/ARexx

- macro language with more than 120 instructions including conditional branching, loop constructions, user requests and embedding of external routines
- ARexx port with mutual ARexx and macro instructions
- automatic macro recording and tracing mode for easier routine debugging
- free menu definition

### Printout

- output in built-in printer font (draft mode) or as freely scalable graphic with all enhanced formattings like font style, frames, cell grid etc... (requires OS2.0 or higher)

### Database

- integrated database with numerous data definition and retrieval options: search, copy and delete operations according to user defined criteria

### Control Options

- full mouse or keyboard control
- toolbar with icon shortcuts
- completely english version including 200 page manual

### Technical Characteristics

- sheet size limited only by available memory
- no restrictions in sheet or window quantity
- import of foreign formats supported (MS Excel, Professional Calc, CSV/ASCII format)
- OS2.0 user interface look and feel
- freely adjustable screen mode and font selection
- all new screen modes of OS2.0 supported
- fast, due to being written 100% in assembler code

### Required Hardware

- Commodore Amiga
- Kickstart 1.2/1.3, 2.0, 2.1, 3.0, 3.1
- 512Kb main memory (1Mb or more recommended)
- supports all common printers

### Design

- extensive formatting options
- all supported font formats allowed, including new vector fonts
- no color restrictions
- various cell frames, including 3D-option
- freely adjustable row width and column height
- more than 40 different number, time, and date formats

### Functions

- more than 100 functions covering mathematical and financial needs
- intuitive input via mouse

### Diagrams

- all common chart types supported (bar, histogram, line, pie)
- footer and header in any admitted character set
- various filling patterns and colors
- optional display of legend and axis labeling
- output as IFF file or graphic printout

## GURU-ROM V6

Years of experience, technical know-how, and competence from the world's best Amiga software and hardware engineers are condensed in this penultimate product. It makes it possible for the user to productively and comfortably use SCSI, without sacrificing performance, risk of incompatibility, or waste of resources.



considerably extended in its code and feature set, replaces all previously distributed driver ROMs.

**Fast:** unparalleled transfer rates of up to 3.5 MB/s raw (Zorro-II limit), 3.1 MB/s measured with »SCSISpeed«, 2.4 MB/s measured with »DiskSpeed« - even on a stock 7-MHz 68000-based Amiga! All the while, the CPU typically retains 80% free processing time. Always maximum performance through the automatic selection of the currently optimal transfer mode (DMA, buffered DMA, PIO).

**Multifaceted:** supports all device types defined in the SCSI standard, such as hard disks, CD-ROM drives, streamers, scanners, and magneto-optical devices.

**Compatible:** complete support for the RDB standard resulting in trouble-free autoboot, automount, and the exchange of devices and media between two computers from Amiga OS 1.3 through 3.1.

**Flexible:** disconnect/reselect, synchronous transfers, and parity checking can be enabled separately for each device (even for devices without an RDB). Also complete write-protection (useful for kiosk applications and for virus protection) is possible.

**Intelligent:** maximum compatibility with nearly all hardware and software through special handling of all known firmware bugs of the most popular SCSI devices and DMA hardware bugs in the A3000 and A4000, workarounds for internal errors in the WD SCSI chip, as well as special modifications to account for defective application software.

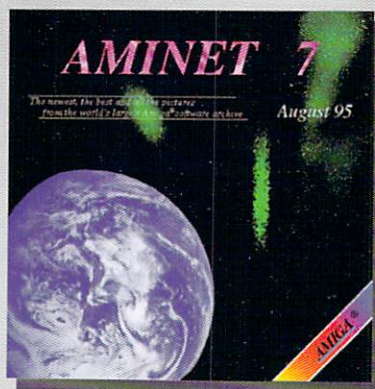
**Upward-compatible:** completely compatible both to the SCSI-2 as well as to the SCSI-1 standard, thereby providing the broadest support for all devices on the market including those still to come.

Stefan Ossowski, Schatztruhe and Ralph Babel, author of the well-known »Amiga Guru Book« and long-standing former system software developer for GVP, the American company known for its high-quality hardware products, present:

**Guru-ROM Version 6**  
The final update for all GVP SCSI host adapters!

Together with exhaustive documentation, the »Guru-ROM« enhances each Series-II host adapter in many decisive and for the serious user essential features: Universal: a SCSI driver without compromise for all Series-II host adapters and all »Combo« and »G-Force« accelerator cards for the Amiga 4000, 3000, 2000, 1200, and 500. This ROM module, which has been

## Aminet 7



Aminet CD 7, dated August 1995, contains more than 1 gigabyte (uncompressed) of software in thousands of archives. Since the release of Aminet 6 CD more than 500 MB new software has appeared. The current edition has a special focus on images. 10,000 images for DTP and multimedia were included.

25 MB	Business software
30 MB	Communications
50 MB	Graphics & sound demos
10 MB	Development software
1 MB	Disk/HD tools
15 MB	Documents
55 MB	Games
40 MB	Graphics software
1 MB	Hardware related
40 MB	Miscellaneous
110 MB	Music modules
10 MB	Music software
15 MB	Text software
20 MB	Utilities

## Aminet Set 1



Aminet is the world's largest collection of freely distributable Amiga software. Up to 10,000 users access the vast archives every day and countless programmers publish directly via Aminet. A wide variety of programs is included: applications, games, demos, pictures, mods, animations, developer material, networking software, programming languages, and more. Until recently, access to Aminet was restricted to international network users. Only 3 years after its inception, Aminet now holds the equivalent of more than 4,500 floppy disks of software. User friendly access software makes the aminet CD's a pleasure to use.

Aminet Set 1, the first "complete" Aminet archive on CD, consists of approximately 4 gigabytes of software in 12,500 archives.

141MB	Development software
103MB	Utilities
134MB	Graphics software
337MB	Pictures & animations
87MB	Text software
39MB	Documents
336MB	Graphics & sound demos
160MB	Games
86MB	Communications
6MB	Hardware related
63MB	Business software
12MB	Disk/HD tools
109MB	Miscellaneous
358MB	Music modules
29MB	Music software

## Subscription

One year subscriptions to the Aminet series are available. There are expected to be six releases per year, so the subscription is actually for 6 CD's, regardless of when they end up shipping.  
**Aminet - 1 year subscription: \$89.95**





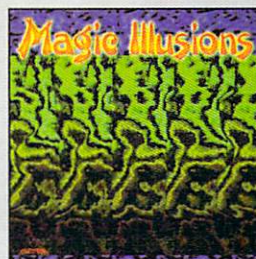
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## The Beauty Of Chaos

## The Light Works

**The Light Works: \$34.95**

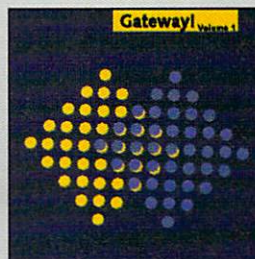


## Magic Illusions

## CD-Write

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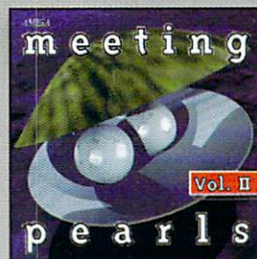


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Gateway: **\$22.95**



## CDBoot 1.0

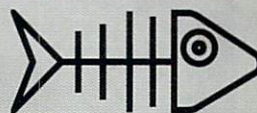


## Meeting Pearls

Meeting Pearls Vol. 1: **\$13.95**  
Meeting Pearls Vol. 2: **\$13.95**

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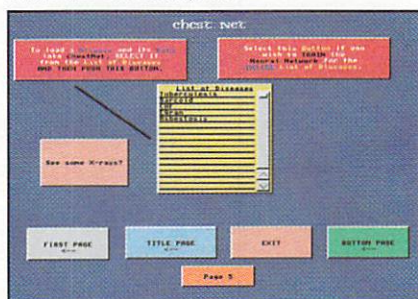
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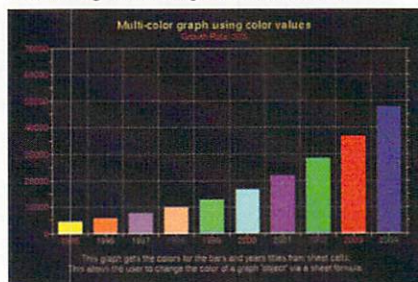
\$40 Macintosh, P.10



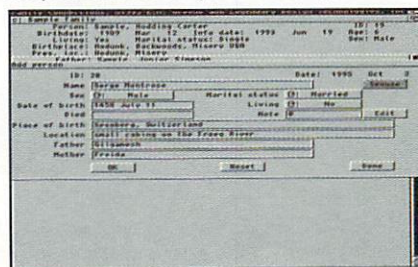
Universe Creation, P.18



The Amiga as Diagnostician, P.26



A Spreadsheet for your needs?, P.34



All in the Family, P.42

## 10 ShapeShifter 3.1

*Reviewed by Marc Hoffman*

Can the Macintosh and the Amiga find peace at \$40. This powerful shareware product permits the Amiga to run Mac software and even utilize Mac files on the hard drive.

## 18 TrueBrilliance

*by Shamms Mortier*

Discover the secrets and fun of creating your own universe with Brilliance! as Shamms shows you how to creatively produce a star background and populate it with your own heavenly bodies.

## 26 ChestNet

*by Michael Tobin, M.D.*

The Good Doctor has once again taken the Amiga where few other computer platforms have gone. Can the Amiga be programmed to recognize disease and more from X-rays? Listen to the Amiga's favorite radiologist as he describes his specialized program.

## 32 On-Line

*by Rob Hays*

Rob continues his exploration of the Amiga on the Internet by discussing newsgroups and the advantage of telnet.

## 34 FinalCalc

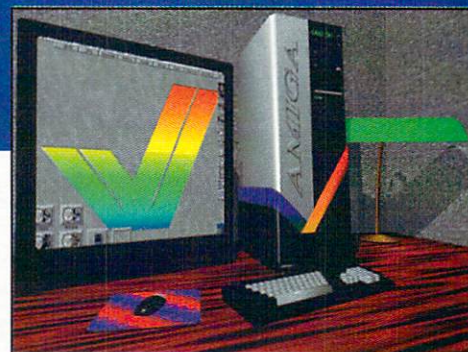
*Reviewed by Merrill Callaway*

Looking for a spreadsheet program for the Amiga? Merrill states, "Softwood has developed a major product to capitalize on the absence of a quality spreadsheet on the Amiga." See if FinalCalc offers you a few new opportunities.

## 42 Family Connections

*Reviewed by Shamms Mortier*

Turn those family stories and ancestral history into a genealogical database of your family. This specialized database should lead you on a merry climb through your family tree.



## 48 AndFurthermore...

Ever wish you could design the Amiga of your dreams? Amiga artist, Dave Matthews has already created his. Take a look at his renderings and then apply your own artistic talents to the challenge.

## GAMES



## 36 Labyrinth

*Reviewed by Jason D'Aprile*

While the rest of the world explores MYST, Jason tests an equally exciting similar title for the Amiga. With outstanding graphics, an exceptional soundtrack, as well as a good story, some may think Labyrinth should be praised higher than its moist cousin.

## DEPARTMENTS

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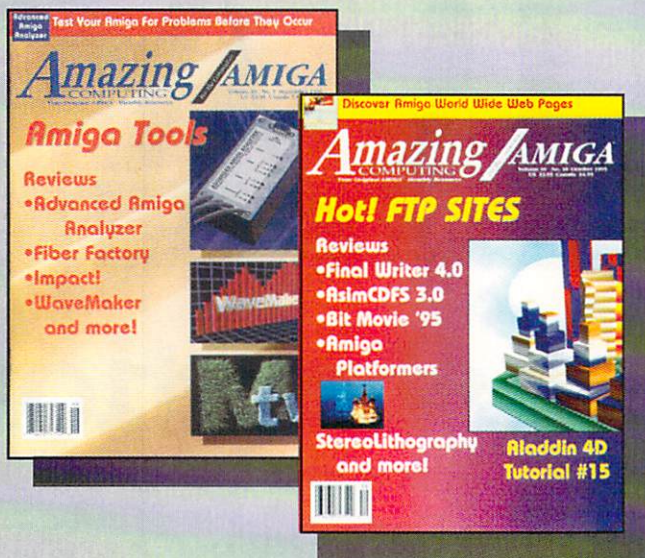
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# EDITORIAL CONTENT

We have received a great many letters in the last month. I thought I would take a few minutes and share two interesting ones. The first is an e-mail message from an Amazing Computing reader.

Subject: expand coverage  
To: Don Hicks

You need more advertisers, and I know how you can get them. Cover the other non IBM, non MAC machines. Specifically, Sun Microsystems has announced that they will be selling a home computer configured for net use in the "hundreds of dollars". Be inc. has announced the "BeBox" and the Amiga and Power PC news groups are obsessed with the machine. There is a world of Amazing Computing out there, that has nothing to do with Big Blue, Apple, or Microsloth. You are only covering the Amiga portion of it (I have an Amiga 1000, and 4000 which I love) and you are getting all the adds from all the companies who still have a few remainders to sell to us. But I got involved in computing with the Sinclair 1000, and the world doesn't begin and end with the Amiga. It's all 1st, 0s, and creativity after all. The rest is just plastic, silicon, copper, and gold.

Let us not forget that the Amiga, and before that the C64 were just a means to an end. They were a way for the average person to access meaningful computer power, and use it in anyway we saw fit. If Amiga Technologies has the foresight to carry on that tradition, then may God bless them, and may you continue to cover them until IBM is just a forgotten memory. But just in case Escom is just a bunch of no class teutonic shop keepers, how about opening up the mag to some other non IBM, non MAC systems AND THEIR ADVERTISERS.

"Gerald R. Everett"  
GREMS@CUNYVM.CUNY.EDU

## Considering

My thanks to Mr. Everett. While we have discussed several options for *Amazing Computing*, none of us had ever considered creating a publication for the Amazing machines that do not already have their own major periodical. If you are new to computing and you visit any newsstand in North America, Europe, or elsewhere on this planet, you could easily assume that there were only two choices: Mac or PC.

Even the Amiga is constantly working to emulate these two platforms (see the article on ShapeShifter on page 10). The only problem is that Mr. Everett is correct, there are other choices available and like the Amiga, there are areas where these other choices do a better job than either the PC or the MAC.

Since LightWave 3D was ported to the SGI, some of the leading post production shops in Hollywood have transferred to that platform. Aside from a variety of speeds and assorted support software and specialty hardware such as motion capture, the platform offers availability. OK, you are not able to pick up an Indigo at your local CompUSA, but you can get them, repair them, and even see them advertised in some publications.

There are many computers as well as other intelligent devices that could use the support of a consumer publication. While there is not a lot of capital in each small market, collectively it does generate interest.

So the Question remains, do we look to broaden *Amazing Computing* by adding other computer platforms and risk losing our support in the Amiga community, or do we continue working with the Amiga and promoting it?

Honestly, I feel the second solution is the best. OK, I have heard many developers tell me I am crazy as they knock the dirt from their sandals and leave the Amiga marketplace. But, the Amiga is a sound platform with solid advantages.

However, I have always promoted this magazine as a forum for public opinion and I would like yours. Send me a letter via the magazine or e-mail me direct at DonHicks@aol.com (but I will be honest and admit that I will be extremely slow in responding).

I apologize for the AOL address since they have still neglected to add the Amiga to their supported platforms. Their saving grace is that they have been extremely useful in both my business and private use. I only wish they would add the Amiga—maybe I should ask Amiga Technologies to give them a call.

## The Doctor Is In

Dr. Tobin is a real Amiga fan. His article, ChestNet, is in this issue. It is interesting to watch Dr. Tobin use the Amiga in his profession. But, Dr. Tobin has taken his crusade to an even broader stage.

Dear AC,

I wanted to inform you of my World Wide Web site "The Amiga Radiologist Home Page." It can be reached at: <http://www.portal.com/~mikety/>

As we move into the age of cyberspace, it is my goal for people both inside and outside of the Amiga community to know that the Amiga is still very much "within the game." The expression, "The Amiga makes it possible," remains true.

Best Wishes  
Sincerely,  
Michael Tobin, M.D.

Is it a small wonder that we believe the Amiga still has an opportunity in North America as well as the rest of the world?

Sincerely  
  
Don Hicks  
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FrozenFish - August '95 '19<sup>95</sup>



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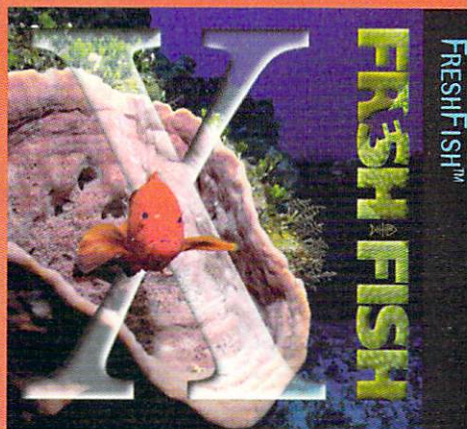
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# AMIGA

## ShapeShifter 3.1

### Can the Macintosh and the Amiga find peace at \$40?

*Review by Marc Hoffman*

Within the past year, Amiga users have seen much turmoil, despair, hopefulness, and anticipation, all feelings associated with our favorite computer's future. Knowing that it is a fact that some Amiga software companies are beginning to produce more on the Mac and PC side of the fence, leaving us in the lurch — Play, Inc.'s Brilliance, for example — many once die-hard Amiga users are now being forced to look at these alternate platforms in order to keep pace. But now there is a way to run Macintosh software on the Amiga without the mess of hardware attachments. Enter the ShapeShifter, a shareware Mac emulator for the Amiga.

The ShapeShifter is a program available from BBSs, user groups, etc. which is freely-distributable in a very usable and functional demo version. The main features taken out of the demo version are the abilities to make a dedicated Mac partition on a hard drive and to use SCSI devices such as CD ROMs and various removable media. The registration fee for the real version is \$40. This \$40

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buys the user a "key file" which unlocks the disabled features of ShapeShifter. What's more, this special file will work with future versions of ShapeShifter.

The package includes: the main program, PrepareEmul (frees lower 8K of chip RAM), a well-done AmigaGuide based on-line manual, KickShifter (for softkicked Amigas), a Mac Handler designed to provide Amiga OS and application access to

OS software. It must be stated that Christian Bauer, programmer of ShapeShifter, does not support piracy of the real Mac ROMs. In fact, Mr. Bauer will not accept an order for ShapeShifter unless the buyer signs a contract stating that this is understood. ROMs must be either purchased from an authorized salesperson or copied from a real Macintosh computer.

ShapeShifter does not use the outdated 256K ROMs as in some other emulators, which can be difficult to find. Depending on the hardware level of the Amiga in question, the ROMs will have to be either the 512K or 1MB flavors. The 512K ROM is not entirely 68040 compliant, and the 1MB is. If a 512K ROM is used with a 68040, for example, then the processor's caches will need to be turned off, decreasing performance. The difference is in the speed and performance of the emulation. PowerMAC ROMs will not work with ShapeShifter.

After installing PrepareEmul and cold-booting the Amiga, the emulation is ready to go. Running ShapeShifter brings up the main requester greeting the user with such items as: graphics, volumes/disks, floppies, SCSI, Memory, Serial, Network, and MISC. (for direct/

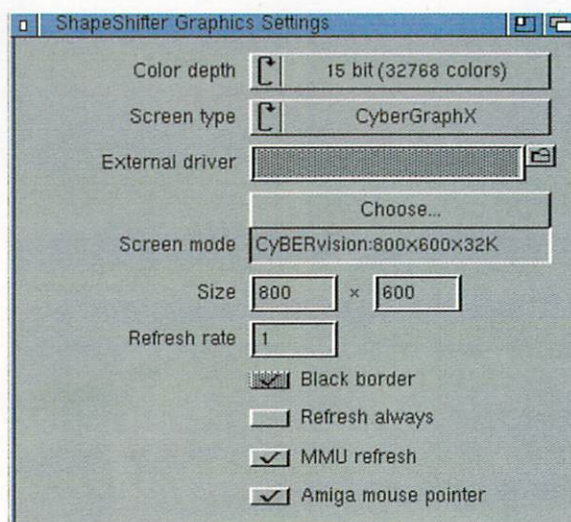
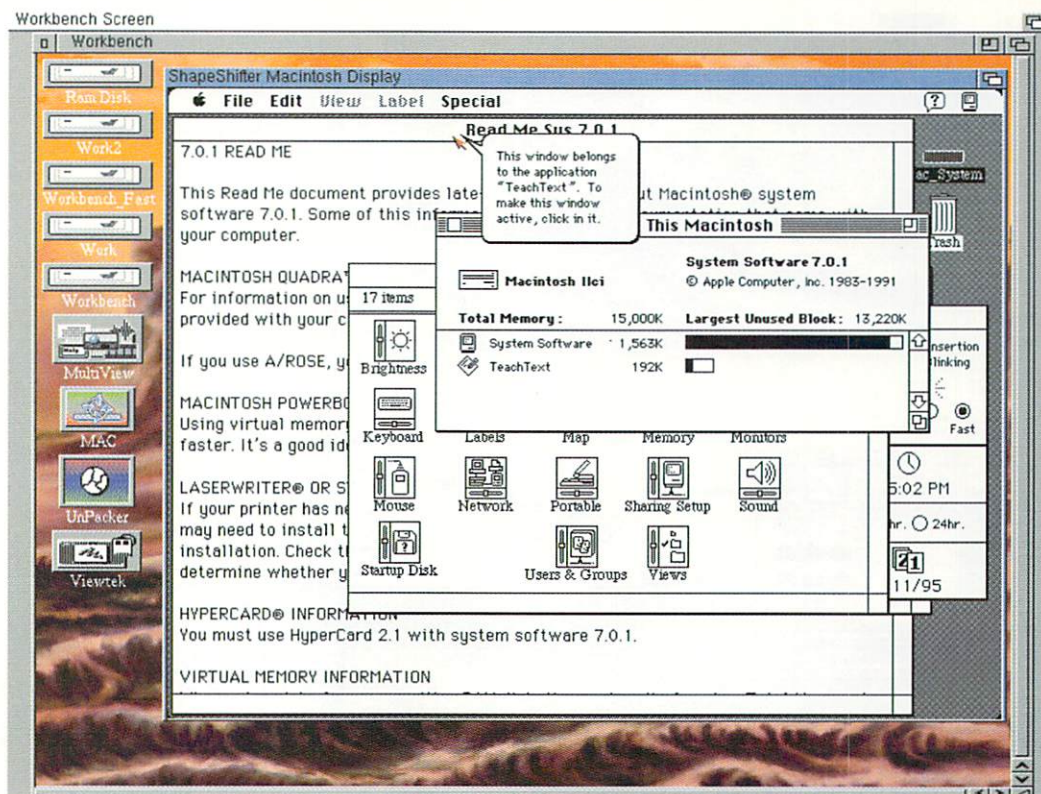


Figure 1

the Mac drives, and SaveROM—a program designed to pull the information off real Mac ROMs and save it as a disk file for use with ShapeShifter.

Two pieces of software not included are the Mac ROMs and Mac





**Figure 2.**  
Run a  
monochrome Mac  
in a window right  
on the Amiga  
Workbench.

indirect mouse polling, ROM write protection, and FPU usage).

Under the Graphics panel (Figure 1), several selections are available: Color Depth, Screen Type, which contains drivers for standard Amiga displays, CyberGraphics, Merlin graphics cards, EGS graphics cards, Picasso graphics cards, a driver for running a monochrome Mac in a window right on the Amiga Workbench (Figure 2), and a selection for an external graphics driver. Also included are gadgets for Screen Mode/Size, a Refresh Rate entry box, a black border option for AGA Mac screens, a Refresh Always option, use of the 68040's MMU to refresh the screen changes, and a nifty little option that allows the use of the Amiga's sprite pointer on the Mac screens.

The Macintosh's built-in graphics handling routines, 32-bit Quickdraw, is quite different than the Amiga's. On the Amiga, most applications expect the display to be in what is known as a "planar" format, meaning that the screen is composed of layered bitplanes. As the number of layers or bitplanes increases, so does the

number of colors. The Mac does not work in quite the same manner. Instead of using bitplanes, it uses "chunky pixels." In a nutshell, a chunky pixel contains all color information no matter how many colors are displayed on the screen. For example, a 32-bit chunky pixel screen mode could display a 2-color screen, 32-color screen, or even a full 16.7 million color screen.

taken between each refresh. But be warned: the results are very slow. Just moving the mouse pointer around the screen can be a tedious task. However, if an MMU equipped 68040 is used and the Mac ROM is set to "Write Protect" under the MISC section, then the MMU is forced to refresh only those parts of the screen that change. Performance is still somewhat sluggish, but it is a world above the former

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## ShapeShifter does not use the outdated 256K ROMs as in some other emulators, which can be difficult to find.

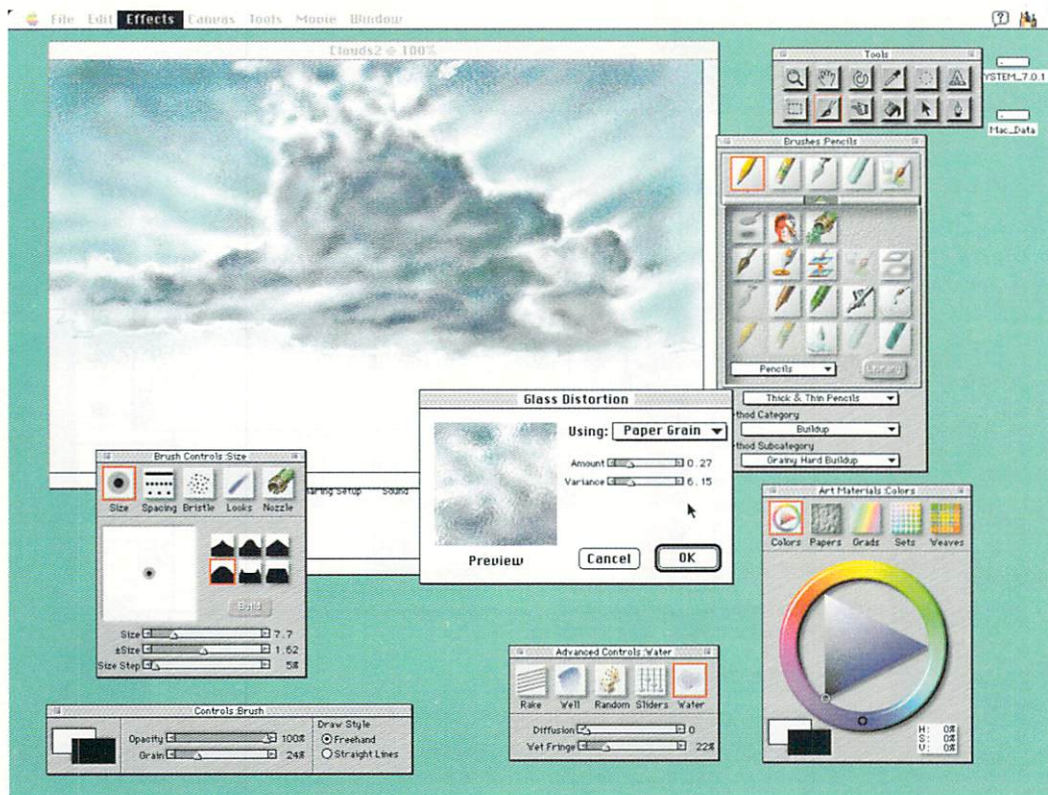
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Since the Mac and Amiga are so different in these respects, a problem exists in trying to get the Amiga to emulate a true chunky screen. Enter the refresh setting, which periodically converts the Mac's chunky pixel format to the Amiga's planar screen format. This setting defines a period

method of refreshing the screen. And with the use of the Amiga's sprite mouse pointer, the MMU doesn't need to update the pointer, thereby increasing the speed even further.

Probably the best way to overcome this problem is to use a graphics card with built-in chunky pixels.





**Figure 3.**  
Fractal Design  
Painter 3.0 running  
on the Amiga with  
ShapeShifter.

Performance on my Spectrum (GVP) card in 256 colors is just as fast as a real Mac, hands down. Unfortunately, my Spectrum card's chunky pixel ability is limited to only 256 colors. When using 15 and 24-bit screen depths, the MMU must refresh the screen as with the Amiga Bitplanes mode. Using the new CyberVision 64 card gives the emulation quite a speed boost comparable with a real Mac, even at 15 and 24-bit color modes.

hard drive. This option creates a custom-sized file on an AmigaDOS volume that is seen by the Emulation to be a stand-alone Macintosh hard drive.

The drawback to this approach is speed. Remember that this is not a real Mac hard drive, and so the Amiga must "jump through some hoops" in order to get it to work. On the upside, with a FAST SCSI 2 interface and drive, the speed factor is very tolerable

dedicated Macintosh partition on the Amiga hard drive or else to dedicate an entire hard drive to the Mac emulation; both are referred to by ShapeShifter as a DeviceDisk. This approach increases hard disk speed factors by several times over. As with the FileDisk, two DeviceDisks can be used at one time.

Amiga floppy drives can also be used with the Macintosh emulation. If a high density drive is used, the Amiga can read/write Mac high density disks. Low density disk support is provided via a special 720K format that is readable not only on the ShapeShifter, but is also readable on a real Macintosh. Unfortunately, there is no way to read/write Mac 800K low density disks within the Amiga drives. To do this, a real Macintosh or compatible drive is needed. Emplant and A-Max Mac disks are also supported.

ShapeShifter is bundled with a Mac Handler that allows AmigaDOS access to volumes on the Mac side. This is particularly useful, for not even CrossMac is able to decipher the FileDisks; AmigaDOS sees

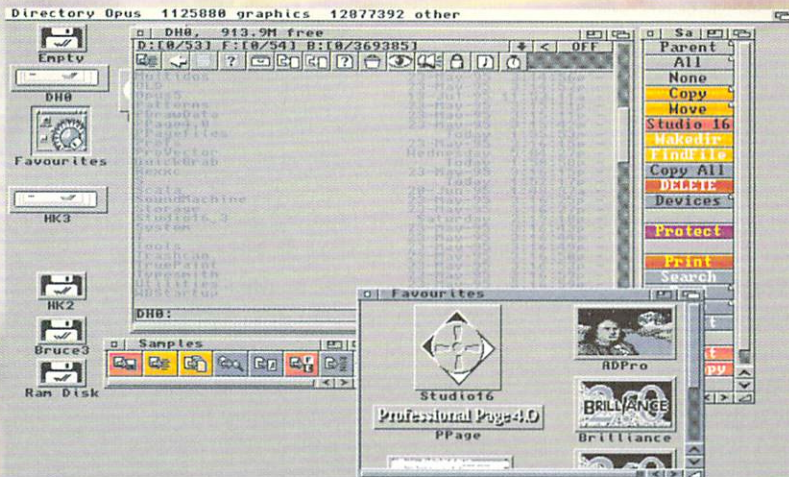
## ShapeShifter is bundled with a Mac Handler that allows AmigaDOS access to volumes on the Mac side.

ShapeShifter supports many forms of mass storage and retrieval including floppies, hard disks, CD ROMs, and removable media. In the volumes/disks menu, the user can create two types of hard disk volumes for use with the emulation: FileDisk and DeviceDisk. A FileDisk is a "fake"

for 10MB to 65MB partitions. Probably the biggest advantage of FileDisks is the ability to create multiple Mac volumes at will (only two FileDisks can be used at a time, however), and not have to re-partition the AmigaDOS device.

The second option is to make a





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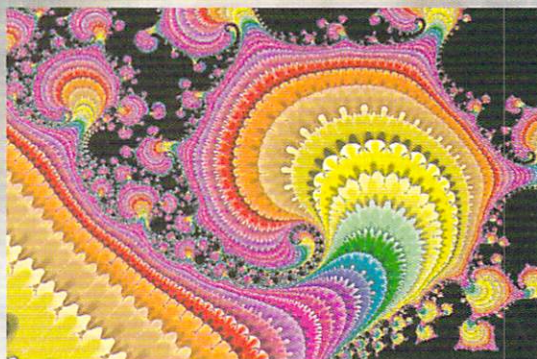
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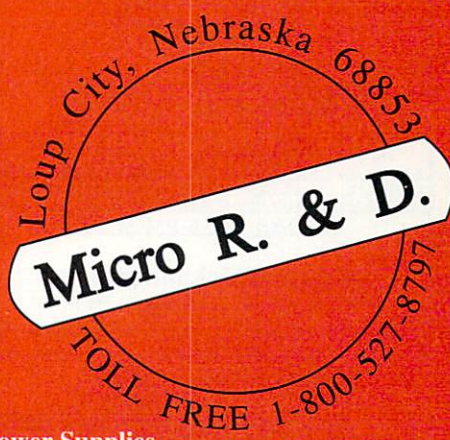
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FileDisks as files only, and cannot access the information contained within them. With the Mac Handler program, the FileDisk or DeviceDisk is deposited right on the Workbench as a normal AmigaDOS device, and it is accessible to Amiga applications. Unfortunately, only one Mac device is available at one time, and the user must specify which device will be accessed via the Tooltypes in the Workbench Information Requester.

In order for the emulation to work, a specific amount of memory must be allocated to ShapeShifter to use as the maximum amount available for the Mac. According to the documentation, this amount of RAM must be in one, contiguous block. Fragmentation of the memory on the Amiga side will cause problems here; two solutions to solve fragmented memory are to reset the Amiga or to use the command "avail flush" in the AmigaShell.

It is interesting to note that this deficiency in memory handling is not the fault of the Amiga or ShapeShifter. It is due to restrictions of the Mac OS. It would be interesting to see if the programmer of ShapeShifter could find a way around this problem.

ShapeShifter can be set to use the largest free block of memory, ensuring that the maximum amount of memory can go to the emulation. The Amiga and Mac emulation can also share information in memory via their clipboards. Text written to the Mac clipboard will show up in the Amiga's clipboard, and vice versa, with an automatic conversion of text taking place.

ShapeShifter is very flexible with its support of serial/parallel ports. It has the ability to use the Amiga's serial and parallel ports as the Mac's printer and modem ports, and it also supports I/O expansion cards. I have tested this ability using Hewlett Packard's HP PaintJet printer driver for the Macintosh, and it prints out graphics and text with excellent speed.

As for networking, ShapeShifter supports Ethernet cards using a SANA-II driver for use with AppleTalk or MacTCP. The documen-

tation discourages the use of System 7.0.1 if ShapeShifter is to be used with networking.

Mouse Polling, Write-Protect ROM, and Do Not Use FPU all compose the MISC menu. Mouse polling can be either directly controlled by ShapeShifter, which increases compatibility with Mac software, or it can be polled by the Amiga OS, which allows the use of input devices like graphics tablets or

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touchscreens.

As explained earlier, write-protecting the Mac ROM enables the MMU to refresh the screen. It also prevents some buggy programs from trashing the ROM. This feature only works on a 68040. Enabling the option Do Not Use FPU prevents the Mac from accessing the floating point unit on the main processor.

I tried the ShapeShifter with many different Mac programs, both public domain and commercial, and here is a run down of the results. In the shareware/PD category, I tested the programs of JPEGView, GIFConverter, Giffer, the Sound Treker, and MacLHA. All three programs seemed to function well, with a few exceptions.

Under its "About Giffer" portion of the Apple Menu, Giffer: will display small, random animated sequences. While in 256 colors, these animations play flawlessly. But in the higher color modes, one of the animations causes the error "The application 'unknown' has unexpectedly quit because an error of type 4 has occurred." This is a minor point, but it is still worth mentioning.

In the commercial arena of Macintosh software, I tested the following titles: Fractal Design Painter



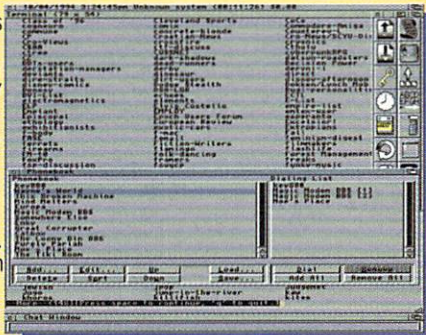
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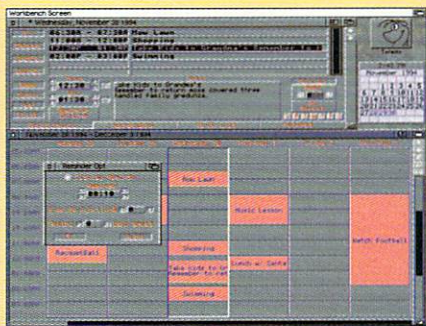
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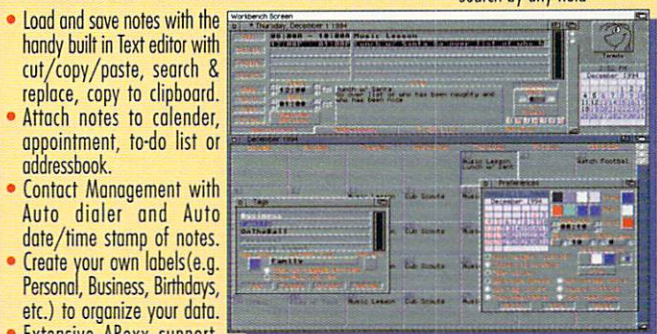
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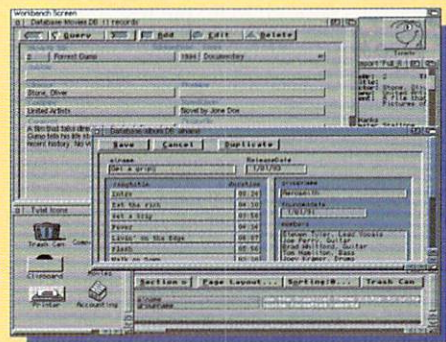
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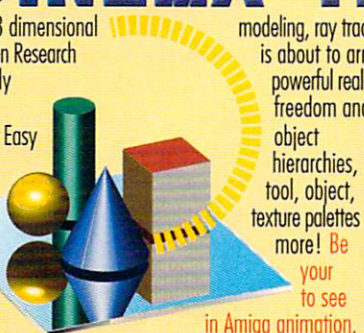
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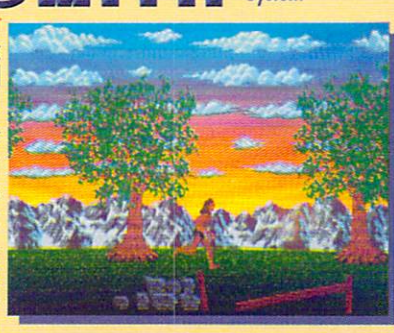
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3.0 (Figure 3), MicroSoft Works, and QuickTime, all of which worked very well. The personnel at Computer Hardware, the Mac dealer that was gracious enough to let me test the ShapeShifter with commercial Mac software, were very impressed with the performance of the emulation. They even said that it "looks like a real Mac." Yet, even with the best of programs, there are always some problems that crop up here and there.

First of all, when testing the emulation under 24-bit, 16.7 million color mode under the CyberGraphics driver with my GVP Spectrum card, the graphics exhibited distortion, making the emulation unusable in many cases. But when I used the updated CyberGraphics drivers written especially for the CyberVision 64 graphics card, the distortion ceased. So this was probably a problem with the older CyberGraphics libraries, or possibly with the CyberGraphics implementation on the Spectrum card.

I also tried booting the emulation

using the older EGS graphics libraries for the Spectrum card. Although the ShapeShifter booted, I was unable to run certain software, most notably Painter 3.0.

One other technical problem is the graphics handling of the emulation. At certain times on the Mac side when a program is run that requires constant updating of parts of the screen (e.g., the alarm clock, with its changing numbers), these screen changes will appear on the Amiga Workbench. Seeing the Mac alarm clock showing through the Amiga Workbench can be rather disquieting.

Also, although ShapeShifter does preemptively multitask, the program still has some problems. Sometimes the program will lock the entire Amiga up. According to the documentation, the following programs will not work with the ShapeShifter: Peace of Mind and Snooper (hardware diagnostic programs), SoundEdit 16, Apeiron, Emagic MicroLOGIC, WACOM ArtPad driver, Epson Stylus driver,

and strangely enough, the System 7.0.1 Sound Control Panel. But Mr. Bauer is always continuing to upgrade and improve ShapeShifter, and it may be possible that a new version of ShapeShifter will be available by the time this review hits the presses. In conclusion, what I saw of this software impressed me greatly.

This review should end by asking one question: Why is ShapeShifter shareware? This program is definitely commercial in quality. Mister Christian Bauer should take a bow. Where else can a \$40 Mac of this quality be purchased? Amiga Technology should seriously think of licensing this software and adding it to the next release of the Amiga's OS. It would be like buying two computers in one! I would like to thank the following for their help in the review of this product: Mr. Dave Babbitt, Mr. Marc Regenos, and the rest of the staff of Computer Hardware, Inc., of Kearney, NE.



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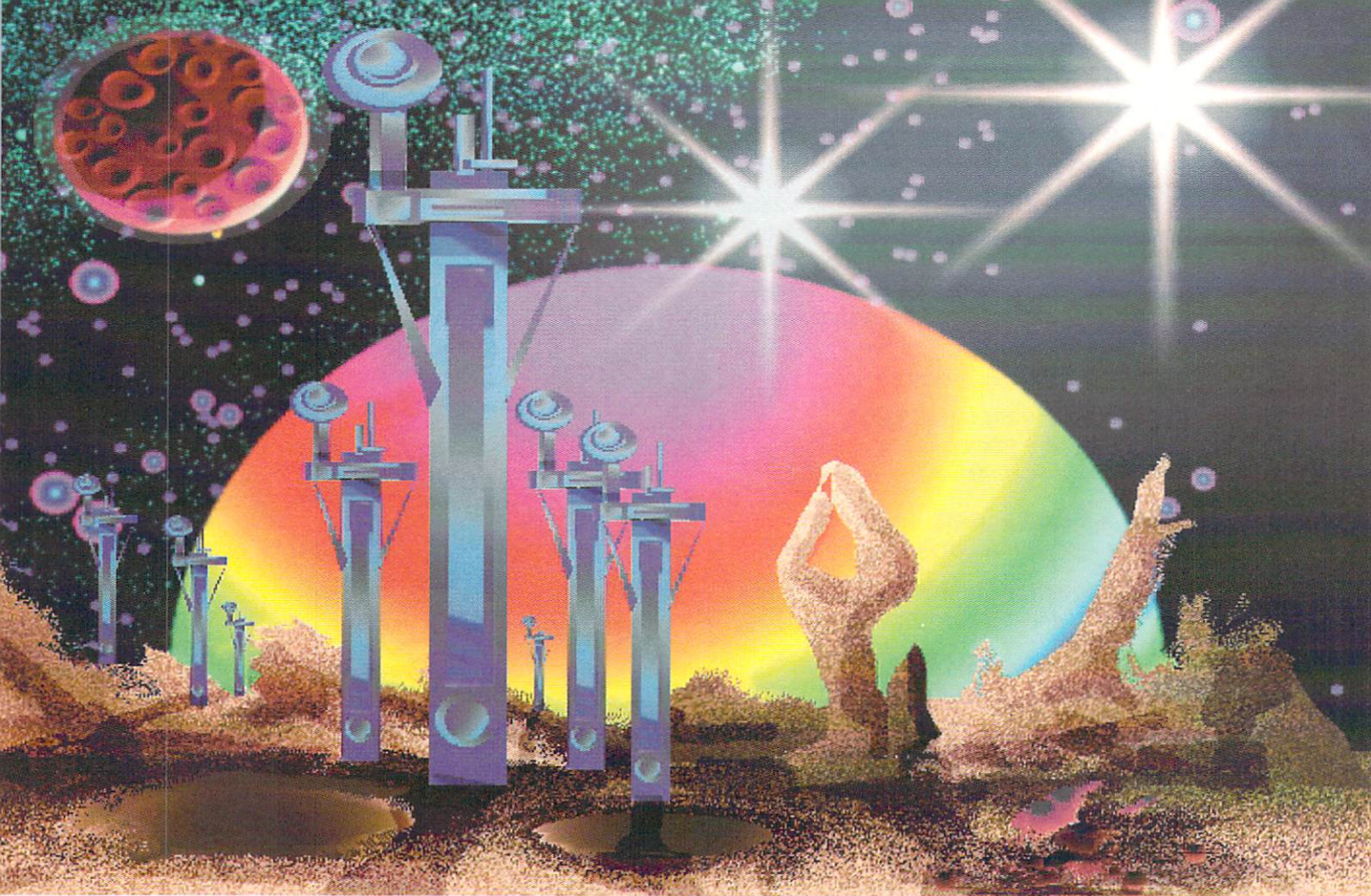


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# A TrueBrilliance Universe

by R. Shamms Mortier

After you have played with the paint programs on non-Amiga platforms, you begin to realize that there are a couple of paint programs on the Amiga that have just as wide a professional scope as any of the others. Certainly one of these is Play Incorporated's TrueBrilliance.

TrueBrilliance and Brilliance are a pair of paint programs that are packaged together. Brilliance addresses the non-AGA modes, and TrueBrilliance incorporates them. We are going to refer to TrueBrilliance in this article because we will be working on an Amiga 4000 system, an AGA environment. So if you have an AGA

machine and TrueBrilliance, work along. If not, we hope you enjoy the tutorial anyway, and that you will have the opportunity to get an AGA machine (an Amiga 4000 or a 1200) of your own in the near future.

## Creating Creativity

Where does the creative spark come from? How is it possible to face a blank canvas, a large stone, a piano, a mound of clay, or a blank computer screen and manifest the start that will develop something from nothing? The philosophers call it "creation ex nihilo", and they can't explain it either.

I have been a practicing artist in many mediums for about forty years, and it still amazes me. I think creativity is at least fostered if not invited by two specific enterprises. One, the most important, is discipline. Every artist that has lasted past her/his teens realizes it. You just have to be available to the creative spirit everyday, even when you don't care to be there.

The second valuable ingredient in manifesting your creative destiny is what we might call, the call of the moment. We could describe this as being separated into two parts: reflections you desire to make about your experience in the world (what you love, what you value, what excites you) and the availability of tools that you feel you need to explore.

The tools of exploration is where an artist's "medium" fits in, what creative environment is an absolute turn on for the artist. For many of us, the world of computer graphics is just



that environment—a world so potentially expansive, we are drawn into it time and time again.

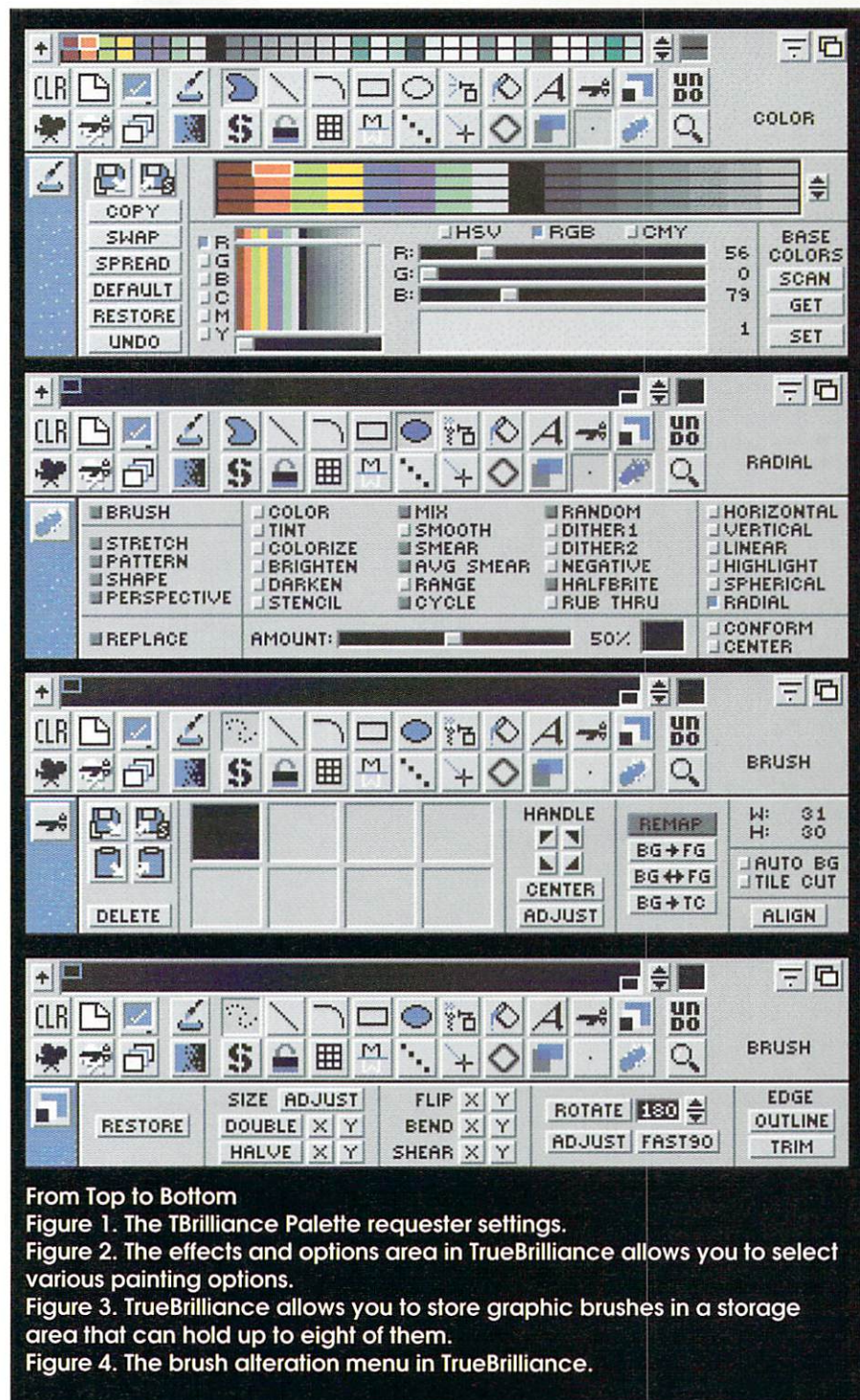
In some sense, I have always found the nature of the tool shapes part of the quality of the exploration. It is why people purchase new musical instruments rather than staying with the lesser quality ones on which they learned. The tool is not everything, as the millions of drum sets permanently tucked away in closets will attest to, but under the right discipline it can support the motivation needed for constant practice and learning.

On the computer, for instance, it was the users' continual frustration with tools (software and hardware) that just could not go where creative people wanted to explore that drove the research and development of new tools. That is still true today, evidenced in software by the continual struggle by developers to upgrade their wares.

TrueBrilliance is the result of many person-years of work, and it is what it is because Digital Creations (later to become Play) listened to the needs of the prospective audience for their product. They then set about to create a creative environment that pushed the envelope even further, giving users access to tools that they did not know they needed. The result is an electronic painting environment that makes creative discipline easy, and opens wide the doors to the world of creativity.

### Space, The Alluring Frontier

Science Fiction topics seem to dominate the creative realms of computer graphic artists and animators. Why? I think it is the call of the unknown, the undefined, and, perhaps, the possible. Space is like a dreamworld. There just might be a neighboring planet tucked behind some star where the beings and their way of living is so different from our own as to make our lives potentially more exciting—if only we could just meet. There also might be beings whose nature is so



From Top to Bottom

Figure 1. The TBrilliance Palette requester settings.

Figure 2. The effects and options area in TrueBrilliance allows you to select various painting options.

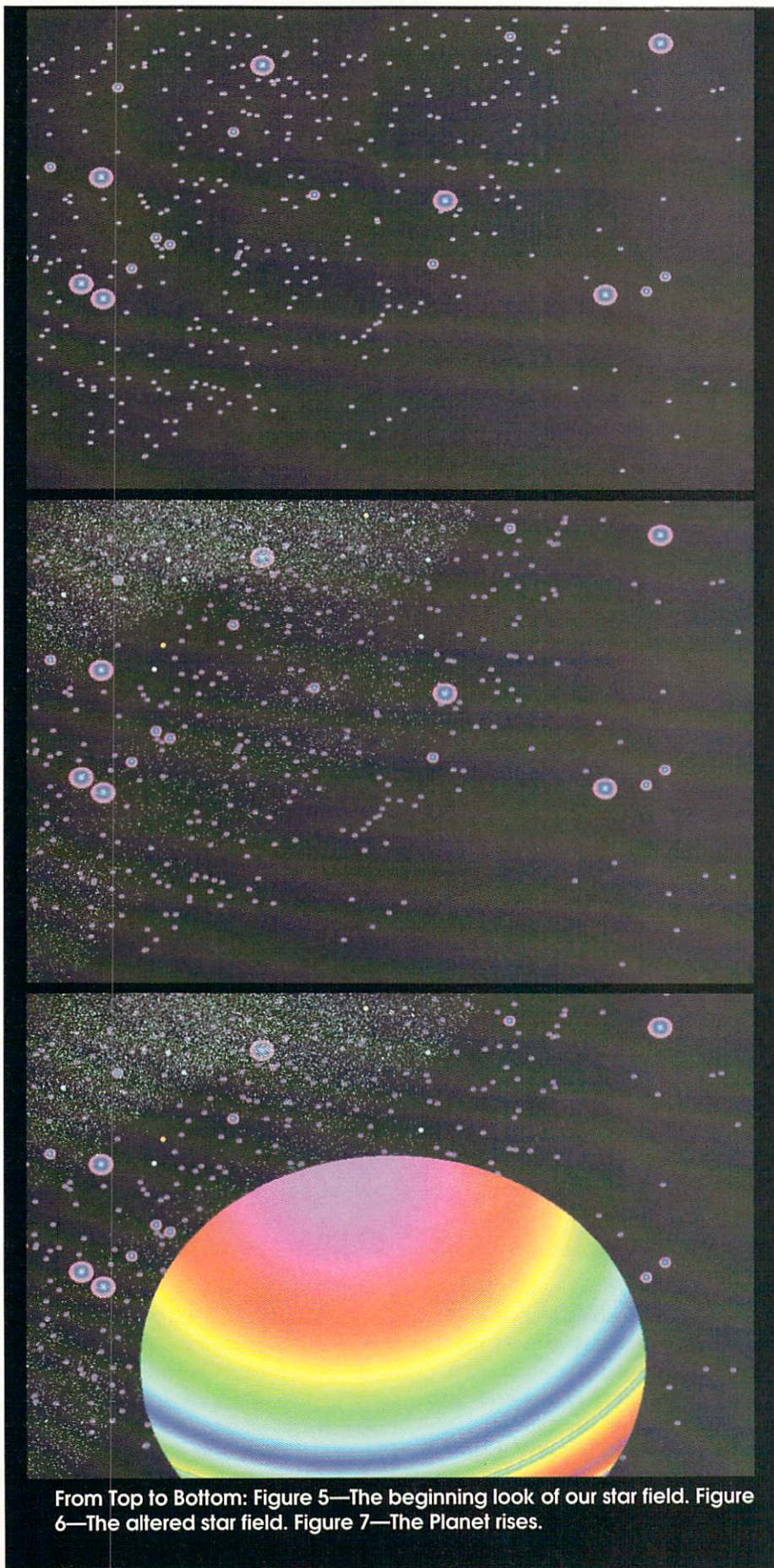
Figure 3. TrueBrilliance allows you to store graphic brushes in a storage area that can hold up to eight of them.

Figure 4. The brush alteration menu in TrueBrilliance.

different from anything that we might conjecture that our common revulsion of each other's existence might foster fight and flight mechanisms, leading to the kind of conflicts of our most revered mythology. For all of those reasons and more, we are mesmerized by pictures and movies that show us cosmic visions, which is exactly what we are going to create here.

Let's begin by creating a field of stars as a backdrop for our world. We do not need to be astronomically correct. Our world is going to be placed at a far distance from Earth, a place never before seen by human eyes. Space is big enough to encompass all of the realities we can conjecture.





From Top to Bottom: Figure 5—The beginning look of our star field. Figure 6—The altered star field. Figure 7—The Planet rises.

Let's start with a dark Blue-red backdrop (I dislike using black as a color for the void). Set the RGB sliders in the palette area to 56, 0, 79. (note: if you are doing this while reading it and you don't know where the palette area is, read the TrueBrilliance manual before proceeding). Now hit the space bar to turn off the menu, and use the paint bucket to fill the screen with the purple color. Hit the "j" key to bring up a separate work area screen.

We are going to populate the sky with stars. But, instead of just spraying ordinary pixels as a way of generating them, we are going to give at least some of them a more defined look. Bring up the gradient menu, and select "clear" to erase the default colors there. Move the slider so you can see the first pot in the palette, and choose the color light blue from the palette above the sliders. Now click on the first "dot" above the slider. Move to the end of the slider area by moving the slider to the right, and repeat the procedure targeting the last dot in the view, but, this time click on a red color. Click on the word "show" to see the full extent of the gradient you have created. You should see a dithered range of colors, moving from light blue on the left to red on the right, with beautiful violets in between. Turn off the gradient requester.

Choose a filled circle from the TrueBrilliance tools palette (click twice on the circle to do this). Now go to the last tool on the bottom right of the menu, right before the magnifying glass, and click on it with the RMB (right mouse button). This is the effects and options area. We want to choose the last box on the bottom, the one that reads "Radial", because we are going to design our stars to have radial appearances with the gradient colors we chose.

Exit this menu, place the filled circle cross-hairs somewhere on the screen, and make a radial filled circle about 1/4" or so across. We want to store this element for later use, so grab the scissors and cut it out using the LMB (left mouse button) and positioning the cross-hairs as needed to outline the object. Click again on the scissors



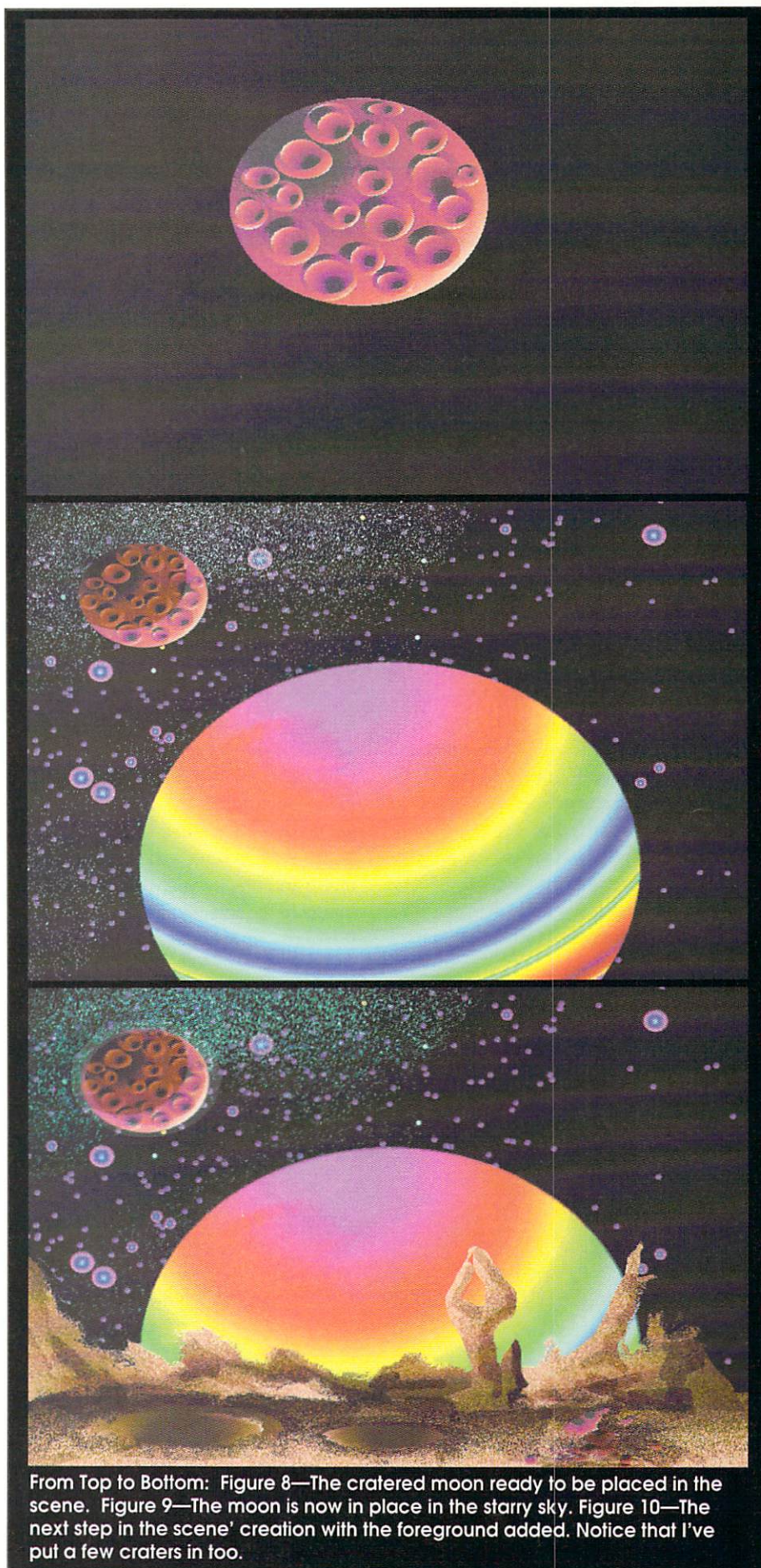
with the RMB to access the brush storage area. TrueBrilliance can store up to eight brushes here.

Using the LMB, place the star in the first available storage area. Go back to the screen and with the first "star" still clinging to your mouse movements, Right Click on the icon on the right of the scissors, bringing up the brush options menu. We want to resize our star to half, creating another star object. Do this now, using the "halve" button.

Go back and store this brush in the storage area. Do it again after creating another star at half of this star's value. Now we have three separate star sizes to paint with, and all three should be seen residing in the brush selector area that is accessed by using the RMB over the scissors icon.

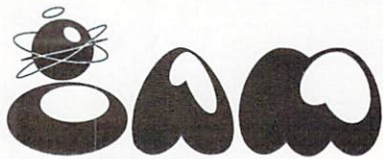
We are going to stay on the scratch screen for a moment so that you have enough time to experiment before committing to finished artwork. Choose the Airbrush tool. If you left click on it repeatedly, you will discover it has three options represented by: lines, dots, and what appears to be a falling stream of particles. Choose the dot option. The small star should still be attached to your cursor. Move to the screen and do a test spray. Notice the dense appearance of the star objects as they group in the spray.

Use the RMB to access the airbrush tool. Select the resizable dot and expand the area of coverage to just about the whole screen. This moves the sprayed elements apart. Go back and test your airbrush. When you feel you have some control over your actions, move to the finish screen (j key) and lay down a pattern. Since TrueBrilliance has multiple undo levels, you can always erase your efforts until you are satisfied. We will use a lot of the smaller "stars", some of the medium sized ones, and just a few of the larger ones. When you are ready, follow the structure as I just outlined and, using the standard painting tool to paint the non-small stars, structure a finished star composition. (Refer to Figure 5 as one possible example.)



From Top to Bottom: Figure 8—The cratered moon ready to be placed in the scene. Figure 9—The moon is now in place in the starry sky. Figure 10—The next step in the scene's creation with the foreground added. Notice that I've put a few craters in too.





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## Brightness and Depth

If you look at your painting at this point, everything is of equal brightness. When we put other elements in the picture, we will have no sense that there is any depth unless we do something to correct this. Let's blur out the image at this point. Choose the filled rectangle, and access the effects options menu and the "smooth" option. Cover the whole picture with the filled rectangle. The smaller stars

get dimmer as you smooth them, and the larger ones lose their jagged edges. Now, just to add a little spice, paint down areas of single pixel stars anywhere you desire. Refer to Figure 6 as an example.

Now we will add a planet looming in the sky and a moon, using diverse effects in TrueBrilliance. For the planet, we will use the filled circle tool and a new gradient range of colors. Choose colors that are interesting to you. These will form the "bands" in the planet's atmosphere. Choose the filled circle and then the "Spherical" option in the effects menu. Paint the planet down on the bottom of the picture, so that part of it disappears at the bottom of the screen. Set the center of the spherical fill (determined when you see the line extending from the circle's center) near the top left edge of the circle so the bands will wrap around the sphere nicely. See Figure 7.

For our "Moon", we will use a filled circle again, but this time we will paint it inside with irregular areas. Use whatever tools you like to do this. Place the Moon in the sky above the left edge of the planet. I like to do this on the scratch screen so I can experiment, and when satisfied, I bring the image to the finished painting to place it where I want it.

By the way, here's how to create 3D looking craters. Choose the filled circle tool and use a varied dark to light gradient. Draw a circle and place the gradient point at the upper left of the circle. Now draw another circle inside that one, with the point of the gradient fill placed at the bottom right. This produces neat looking crater objects on a surface—see my moon in Figure 8.

Cut the moon out with the scissors tool, resize it as you like, and place it in the sky on the finished painting. You may want to add some shadowing for effect by choosing "darken" from the effects menu. See Figure 9.

Just for effect, I added a shadow on the planet and fuzzed it out a bit. Now let's imagine that we are looking at all of this while standing on another moon, a craggy surface with its own architecture. We will use the filled freehand tool with its own gradient of colors. I am going to use a range of browns and tans and I am going to set the dither in the gradient palette about 3/4 of the way up. This will give us a graininess in our closeup terrain. Remember, you lose graininess at a distance, but using it for closer elements gives you the perception of a 3D scene. Play around until you get something interesting. After I created the basic terrain, I used the smear effect and shadows (darken) to give more depth and realism to the scene.

As a final touch, I used the gradient and polygonal tools to add the remnants of a forgotten structure—reminiscent of a lost race of beings. I wanted to leave the viewer with the sense of being lost in wonder to wander into the painting further. Additional blurring effects and smearing was added until the painting appeared finished to me. As an afterthought, I moved the painting into Nova Designs excellent "ImageFX" software to add the flares in the sky.

Enjoy! See you next time in ROMulan space.

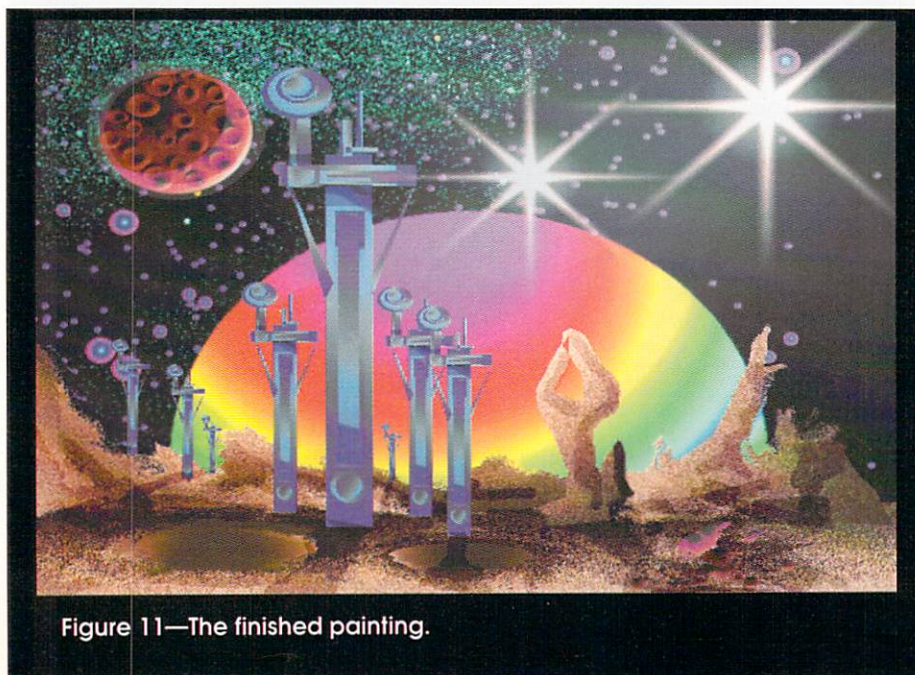


Figure 11—The finished painting.

•AC•





## DKB Announces WildFire 060 Accelerator for the A2000 & RapidFire SCSI-2 Controller

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# Chest Net — An Amiga based Neural Network for Radiology

Can the Amiga be programmed to recognize disease and more from X-rays?

by Michael Tobin, M.D., Ph.D.

I have been intrigued for some time by the possibility of computers making medical diagnoses. I also felt that the Amiga, being the rather nifty little computer that it is, could handle the challenge — if given a little medical training, of course.

I thought that the information density on a standard chest radiograph was too much for a small personal computer to analyze. So, I decided to take a different approach and describe to the Amiga typical appearance of each of several chest diseases. I then planned to input data from an actual patient and ask for Amy's opinion as to which disease it most closely resembled.

## Neural Networks

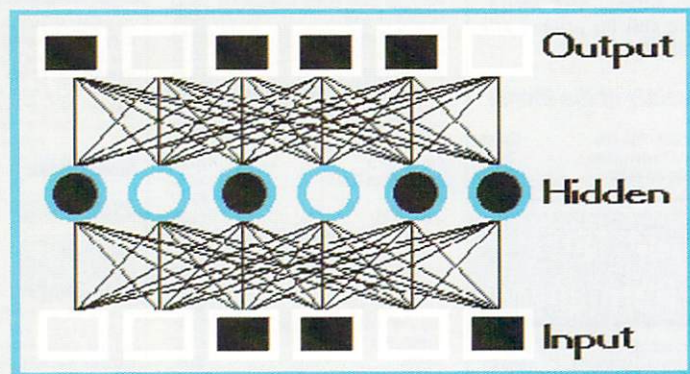
Neural networks are widely used for making predictions. They are therefore used in areas as diverse as financial markets, economics, and even weather forecasting, to name just a few. While not every problem seems amenable to a neural network approach, the results can be impressive for those that do.

The neural network is essentially a "black box." In its simplest incarnation, a neural network has three layers. You train it by putting data into its Input Layer and telling it what the Output Layer should be in each case by putting the "correct answer" in the Target Layer. The input data is presented over and over again until

the Output\_Layer matches the Target Layer. The neural network achieves this goal by modifying a Hidden Layer, which sits between the Input and Output layers and has connections with each cell in both layers (Figure 1). Training the network, then, involves strengthening or weakening the connections to and from the Hidden Layer. Once trained, the network is tested by putting data from an "unknown" into the Input Layer and reading the Output Layer for the result.

## But is it available on the Amiga?

NeuroPro 2.0 has been available from MegageM since 1992. It is a three layer system, with a maximum of 256



**FIGURE 1:** The NeuroPro (MegageM) icon helps explain the neural network concept. The neural network is given data in the Input Layer and then told the meaning of that data by information placed in the Target Layer. Training the system requires that Input and Target pairs be presented over and over again. The Hidden Layer, which has connections to every cell in both layers, adjusts the strength of its connections until the Output Layer matches the Target Layer for each Input-Target pair. Once the network, i.e. Hidden Layer, has been trained, new data can be placed in the Input Layer. The network will then respond with an answer in the Output Layer.



**FIGURE 2:** To see which disease your x-ray corresponds to, just check the boxes that describe what you see. Using ARExx, Chest Net will send the data to NeuroPro and get its opinion.

The screenshot shows a window titled "chest net" with a light green background. It contains several panels with checkboxes for diagnostic information:

- Parenchyma:** Clear, ☒ Infiltrate, Alveolar, Infiltrate, Interstitial, Infiltrate, Mixed, Miliary, Reticular-Nodular, Fibrocystic, HoneyComb.
- Location:** Upper, Middle, Lower, ☒ Bilateral, Butterfly.
- Pleural Fluid:** None, ☒ Bilat, ☒ Bilat, R > L, ☒ Bilat, L > R, Loculated, Unilat, small, Unilat, Large.
- Chronicity:** N/A, Acute, Subacute, ☒ Chronic.
- Age Group:** ☒ New Born, ☒ Pediatric, ☒ Adult.

At the bottom, there are four buttons: "TITLE PAGE <--", "BUTTON PAGE -->", "EXIT", and "NEXT PAGE -->". Below these is a small orange box labeled "Page 1".

inputs and outputs. Valid data would include small images, linear arrays of 256 pixels either turned "on" or left "off" using a paint program, and ASCII text. ASCII text is limited to 32 characters (8 bits per character) and must be right justified to position 32. To train the system, one needs an Input file, a Target file (the "right answer," so to speak) or a Pair file, with lines alternating between input data and target data. In my case, I decided to create Pair files with entries that looked like:

```
100051110000111100000111100004011
Tuberculosis
222000111000822110000000000111003
CongestiveHeartFailure
etc.
```

where each number in the 32 number string represents some feature of the x-ray.

After training the system by presenting the Input and the Target data anywhere from 100 to 1000 times — done automatically by the program, one tests the network by giving it an Input file with numbers hopefully similar enough to those the system was trained on so that it will recognize them as belonging to one of the diseases already in its list.

### The 15th Character Means?

Well that's the point. The 15th ASCII character may have meant that the x-ray was that of an adult or maybe it meant that there was a pneumonia in the left lung. And good luck in not making a mistake and putting what was supposed to be in the 15th slot into the 16th one instead.

the button corresponding to "adult," a number is generated which corresponds to that choice (Figure 2). When the user is finished checking off the boxes that describe an x-ray, the Chest Net uses Helm's scripting language to "read" which buttons were checked for each option and then uses AREXX to create a file with the corresponding

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**... neural networks are limited by the expertise of the person who provides the training data (i.e., the Pair file). Ultimately, computers are no smarter than we are. If I don't know the typical radiographic appearance of PCP pneumonia, then neither will Chest Net.**

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And who really would want to use the system on a routine basis if one had to open a text editor and type in 32 characters while looking at a chart to see what everything meant. What is needed is a good interface.

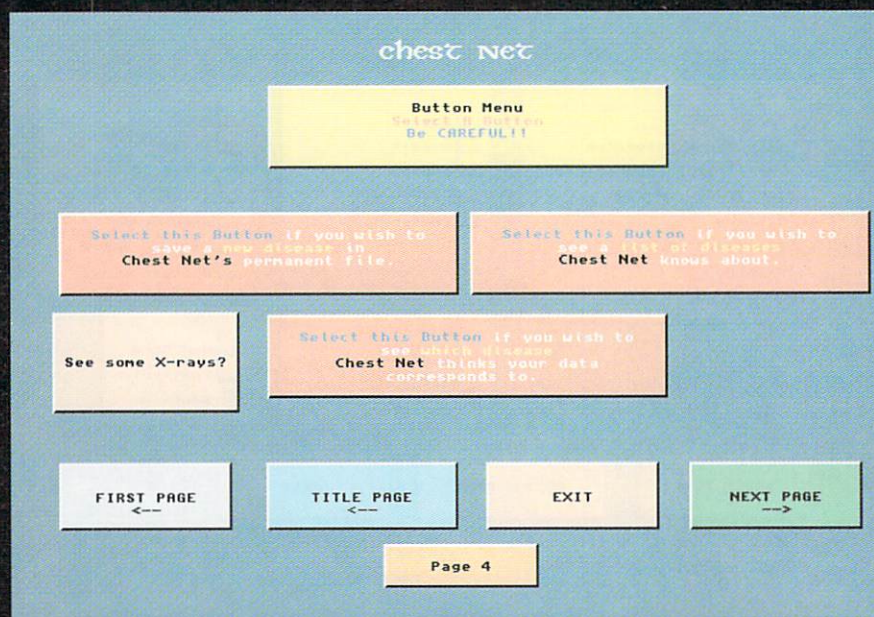
### What is an Amiga user to do?

First, I used Helm (Eagle Tree Software) to create an interface, which I call Chest Net, filled with radio buttons and other types of selectors so that when a user chooses, for example,

numbers. NeuroPro can then be launched from Chest Net to read the file and use the data (Figure 3).

Chest Net provides options for creating, adding to, or replacing data in a Pair File which it then stores on the system disk. Chest Net can provide a list of diseases already in the Pair file (Figure 4). It can then load the data of a specific disease from the Pair file back into itself so that the user can see what boxes were checked off originally. It can make NeuroPro train itself (i.e.,





**FIGURE 3:** Before you can get a consultation from your Amiga, you will first need to create a file that contains descriptions of typical chest diseases. After you check the appropriate boxes for each disease, Chest Net will do this for you.

generate a network) using the Pair file. Once the network has been trained, Chest Net can be used to transmit an "unknown" from an actual patient to the network to get a diagnosis. Finally, there is even an option to view representative images (Figure 5).

### How do you use it?

Presumably as the "expert," I would be the one to define what is seen in tuberculosis, sarcoid, asbestos disease, etc. and then I would train the network. You, as a user, would check the boxes corresponding to your "unknown" chest x-ray and then push the a button to get NeuroPro's opinion. As a user, you could still modify the Pair file in case your opinion of what congestive heart failure looks like is different than mine. You could also add to the Pair file diseases I chose not to include. If you do make changes, you will have to train the network all over again. This is a time consuming operation even with an Amiga with a Motorola 68040 CPU.

Well, does it work?

Not only does it work, but it has worked well enough to amaze those I have shown it to. The "unknowns" do have to be similar to the diseases in the Pair file or else NeuroPro's output

becomes a gibberish of letters and characters.

### Are there limitations?

There are definite limitations. Some of these are related to the complexity of Radiology while others are inherent in neural networks or in this Amiga implementation of them.

First, neural networks are limited by the expertise of the person who provides the training data (i.e., the Pair file). Ultimately, computers are no smarter than we are. If I don't know the typical radiographic appearance of PCP pneumonia, then neither will Chest Net.

Second, there may be (and often are!) a variety of radiographic presentations for the same disease. A patient with PCP pneumonia can, for example, have a perfectly normal looking chest x-ray! Such patients will usually, however, have abnormal gallium scans, abnormal arterial blood gas values, positive findings on lung washings performed via bronchoscopy and problems with their immune systems. If such possibilities are considered in Chest Net, multiple presentations of the same disease could be entered as distinct entities and be given labels like PCP.1, PCP.2, etc.

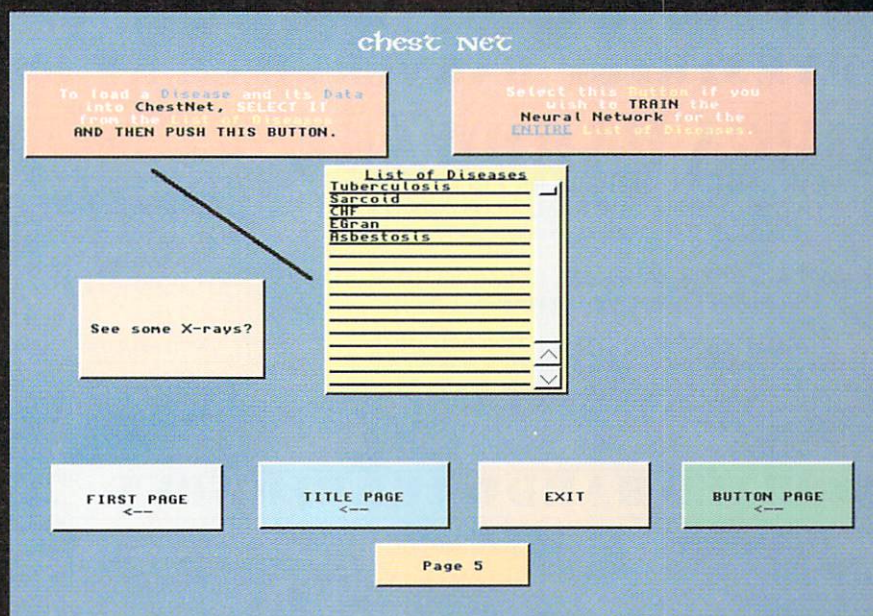
Third, just as one disease can have multiple presentations, several diseases can have essentially the same radiographic pattern. Indeed, this turns out to be quite common and the radiologist is then unable to give a specific diagnosis. Rather, only a list of diagnostic possibilities can be given with some possibilities more likely than others, depending on other factors. Sometimes clinical history is helpful. Does the patient have a fever? Was the abnormality present throughout the patient's life? If we provide a "clinical history" selector with these possibilities given as options, we may be able to handle this complication. However, sometimes even knowing the clinical history will not permit a specific diagnosis. Yet this is what we are usually asking the neural network to do.

My fourth point would be that each x-ray is a moment in time. Knowing what the previous radiograph looked like is very important. Is the patient improving on antibiotics or is a "water pill" making the x-ray better? Of course, we could allow for the results of prior studies in the program but .....

... and this brings me to my fifth point. Thirty-two descriptors for all chest diseases, is really a rather small



**FIGURE 4: Chest Net can tell you what diseases it knows about, allow you to add to its list of diseases, train the neural network and even tell you which disease your patient most likely has — provided you can describe the x-ray findings.**



number to be restricted to. To describe a chest radiograph adequately, we could easily justify a number 2 or 3 times larger. One solution might be what I call an "adaptive neural network system". By this I mean that selection of certain boxes in Chest Net could, in fact, lead to a variant set of questions — and a different network — thereby greatly extending the 32 character limitation. So, if you selected "Newborn" under the "Age Group" Selector, you might see different questions than if you had selected "Adult."

Finally, there is no way, at least in this version of NeuroPro, to "weight" any of the 32 inputs so that some are more important than others. Suppose, that a certain disease only occurs in women. There is no sense in allowing NeuroPro to suggest as a diagnosis a disease that only occurs in men! Thus the sex of the patient may be absolutely irrelevant for one disease and be totally determining in another with everything in the middle being possible. There is no smooth way that I see for doing this in NeuroPro at this time.

### The Bottom Line

The bottom line, is that Chest Net is potentially useful, providing we recognize its limitations. A busy radiologist is probably not going to have either the time or the need to consult a neural network for most cases. There will always be challenging radiographs and it may be useful to find out what the computer has to say especially if a colleague is unavailable.

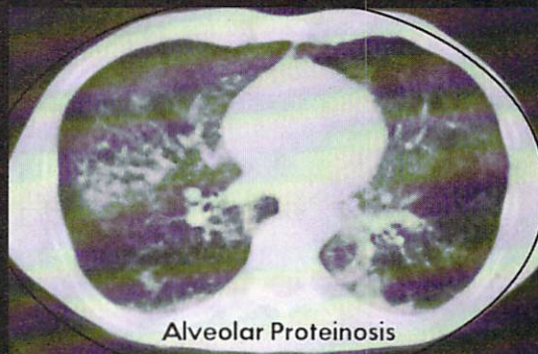
The situation with radiology residents in training may be different. If nothing else, Chest Net is organized and thorough. One resident felt that it could help him become more structured in his approach to a chest film and less likely to miss findings.

Perhaps, I am the one after all who got the most out of Chest Net because writing it forced me to think about how I think and what I teach. Being forced to 32 descriptors, I was compelled to concentrate on crucial factors that can make or break a diagnosis.

Finally, it is worthwhile remembering that a patient is a person while an x-ray is just an image. Consequently, one never treats an x-ray abnormality, only a patient. If an x-ray provides unusual or unexpected results, the x-ray is repeated to exclude the possibility of artifact. Experience, good judgement and empathy. Now how can I use AREXX to program that?

•AC•

**FIGURE 5: Chest Net can access images you have stored on disk so you can compare them with those of your patient. This CT scan shows what you might expect to find in Alveolar Proteinosis.**





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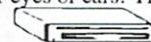
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## LICENSEWARE ON FLOPPIES

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-By Kit Felice. Amazing multi-level AMOS arcade game. REQ:Hard drive, 2 MB RAM, ECS or AGA, LHA decompressor, any Amiga OS. 3D tunnel scenes are featured in this excellent arcade adventure game. Hours of fun!

**TOMCAT \$19**  
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-By Shane R. Monroe. So easy, you'll learn it in 5 minutes; so addictive you'll play it for 5 hours! This strategy game features EHB graphics, digital speech, original music, two player mode and much, much more! Complete with many awesome background graphics! You'll love it!

**PSYCHO SQUARES DLX:ADULT GRAPHIC DISK \$4**  
-By Shane R. Monroe. If you love Psycho Squares Deluxe background graphics, imagine playing for STEAMY ADULT pictures! 13 levels of beautiful, hot women! Requires the registered version of Psycho Squares Deluxe sold above.

**WAR GAME PROCESSOR \$25**  
-By Sean Emerson. Your favorite wargame can now be played on computer, using a friendly graphic interface. Positions can be saved to disk, as well as detailed histories of where each unit moved in the previous turn or phase. These can be sent e-mail to your opponent, who will be able to replay the turn, even seeing your comments as play unfolds! Or maybe your opponent doesn't have this program. That's okay, because the War Game Processor can generate your turns into summaries of plain English text! All you do is make your moves. Other features are: compatible w/most strategy board war games, play by mail/Email, full color graphics, scrolling play screen, replay/review moves, automatic dice rolls, customizable dice, stores any # of games/setups at once..... too much to list! Also comes with a module editor that allows you to generate WGP modules for your favorite wargames and edit the heck out of them!

## PUBLIC DOMAIN SOFTWARE

All our PD disks are now only 99¢ EACH! That includes all disks from our library, Assassin Game disks (200+), LSD Utility Disks (170+), 17 Bit Software disks (3800+), Amos PD disks (700+), Fred Fish Disks (1-1100+) plus more! That's about 10,000 PD disks available to you for only 99¢ each! Why bother paying more when you can get it here for less? Send \$3 for our paper catalog, 4 disks of disk catalogs & a sample disk from our library! See something we don't have? Call us & we'll get it!

## ADULT CD ROM TITLES

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ERUPTION	SIXTY NINE
EXOTIC EXTASY	SMOOTH LIPS
GIRLS OF PARADISE	SPICY PICS!
HOT PIX 5	TIGHT PANTIES
HOT PICS:VOL. SEX	TOP HEAVY
LUCKY LIPS	TROPICAL HEAT
MOODY NIGHTS	WET DREAMS
PARTY TIME	WHITE UNDERWEAR
PUSSY GALORE	WILD WENDY

\*MUST BE AT LEAST 18 YRS OLD\*  
\$19.95 EACH  
ANY 5 FOR \$89.95  
ANY 10 FOR \$149.95

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ONLY \$10  
EACH!



### HOURS

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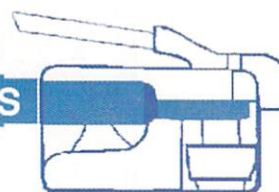
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# on line

by Rob Hays

## amiga telecommunications



## Continue your tour of the different segments of the Internet.

### Have you read the news today?

Two years ago this month in the first installment of On-Line, I used the image of a giant bulletin board to illustrate the idea behind computer bulletin board systems. The image is an apt one, although too constrained when discussing the Usenet, also known as the Newsgroups.

Usenet is often thought of as being the entire Internet, even though in actuality, it is a separate system, available to systems not connected to the Internet. To say that Usenet is vast is an understatement. There are currently more than 5000 separate newsgroups, each containing hundreds or even thousands of individual postings from users. Every day more than 40 megabytes of messages are added to the files.

While the Internet itself thrives on diversity bordering on anarchy, the sheer volume of message traffic dictates a certain order to Usenet. Beginning in the 1980's, topics were arranged into logical groups, so that if you are looking for information on RAM chips, you don't have to wade through discussions of chimpanzees or protozoa. Following the Unix naming conventions broad topics are subdivided with periods into narrower topics. For example, comp.sys.amiga.games, progresses from the wide-open topic "computers", through "systems", to the "amiga", and ends with "games."

A few of the other topic and subtopic abbreviations you will run across on the Usenet are: "rec." covering recreational activities, "sci." for the sciences, "soc." for social topics, the ever-popular "misc." for topics that don't fit anywhere else, and the often controversial "alt." topics.

Most newsgroups are moderated, or overseen, by an individual or group, that keeps the discussions focused on the stated topic. The alternative topics are much more free-ranging, and rely on self-discipline for any focusing. The "alt." topics are where you are most likely to find not only topics, but language that some may find offensive. Remember that Usenet is used by people from all over the world, and not everyone will find the same things offensive.

If you find a topic that offends you, just avoid it in the future. If you post inflammatory comments and accusations against those who do enjoy that particular topic, you are engaging in a practice known as "flame-baiting". This often results in heated responses from those you originally attacked. Unchecked, this type of exchange quickly degenerates into what is known as a "flame war." While you might enjoy such exchanges, it does tend to tie-up valuable computer time, and take up memory all across the Usenet. If you persist in trying to annoy other users,

they may petition the sysop of your Internet provider to restrict or remove your access to the Net. Before this happens, you may even find yourself "mail bombed". This is the term used to describe the tactic of sending massive amounts of useless e-mail to your mailbox. Usually many different people will send megabytes of random characters to you, filling up the space available to you on your providers' system, and thereby blocking any legitimate e-mail from getting to you. While these last two examples are extreme, and rarely do things go this far, it is always best to practice the "live and let live" philosophy.

Another way to handle topics, words, or even specific posters that annoy you is the killfile. No, this is not a file sent to out of work hit squads, but a list of things you don't want to read about. Because of the many different systems, the best advice I can give you is to check out the help files on your newsreader. Killfiles are read by the newsreader program at startup. The newsreader then eliminates from the unread messages, any that contain the words or phrases you placed in the killfile.

While the Usenet is text only, binary files, such as programs, or images can be posted using UUEncoding. The program UUXt, which has recently been upgraded to version 3.1, allows conversion of program and data files into a form that



can be transmitted as text. See the March/April 1995 On Line for more information on this program.

Current Usenet topics available concerning the Amiga are quite varied. The following topics all begin with "comp.sys.amiga." and should be available on your Usenet newsfeed. All names are in lower case letters only. Advocacy, audio, CD32, multimedia, programmer, reviews, games, misc, graphics, hardware, introduction, marketplace, emulations, applications, datacomm, networking, and announce. There also are topics titled comp.unix.amiga, comp.binaries.amiga, comp.sources.amiga, alt.religion.amiga, alt.amiga.demos, alt.sources.amiga, alt.sys.amiga.demos, and alt.sys.amiga.uucp.

### Take off

Last month we talked about FTP as a way to reach out and grab files from the Internet. Sometimes getting a file or two from a remote system just isn't enough, and that is where telnet comes in. With telnet you actually log onto the remote system as if you had dialed them directly. While there may not be as many systems that are available to an anonymous telnet user as there are for FTP, telnet opens the door to powerful functions that your provider may not have available.

The basic telnet function may seem rather redundant, if you need an existing account on the remote system to be allowed on, why not just dial direct? In my case, I use telnet to connect to my accounts on Portal and Delphi. My Internet provider supports modem speeds up to 28,800bps, with even higher speeds used between sites on the Net. The local access number where I live for Delphi is 2400bps, and both systems would be an across-country long distance call for higher speed connections. By calling a local number, and using telnet, I can get high speed access to these other systems.

Telnet opens many other doors on the Internet too. Library catalogs and databases of all sorts, can all be accessed as easily as remote BBS's. One of the best places to start is a telnet address with the name access.usask.ca. Go to the area of your provider that allows telnet functions, and type that address. At the login prompt, type hytelnet and press return.

This will activate a menu driven system that will provide you with many different telnet sites, and instructions for their use. It would be a good idea to turn on your terminal programs capture function, and save all the information for later reference.

### Who Ya Gonna Call?

Here are some more Amiga BBS's submitted by readers.

NAME: A.I.M.A. World BBS  
PHONE: (909) 884-1747  
SPEEDS SUPPORTED: up to 38.4kbps  
CONTACT:  
R.Dewey Mullins III  
P.O. Box 3791  
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Next month, we will continue talking about telnet functions and more.

That's all for now. See you On Line!



# FinalCalc: A Spreadsheet Application

Softwood has developed a major product to capitalize on the absence of a quality spreadsheet for the Amiga.

by Merrill Callaway

It has been refreshing to witness Softwood, Inc. faithfully and vigorously support the Amiga throughout its trials and tribulations. Their newest product, FinalCalc, a spreadsheet program, is truly an inspiring piece of work. It comes attractively packaged in a three-ring binder that fits into its own bookshelf box. Four diskettes are in vinyl storage pouch notebook pages. My overall impression is of a fully featured application of the highest quality. The substantial manual is very well done, as we have come to expect from Softwood.

## System Requirements and Installation

Softwood "strongly recommends" that FinalCalc run on a system with at least 3MB of memory (2MB will "load and run" they claim). I did not test memory limitations, but I agree you can never go wrong adding memory. FinalCalc requires Workbench 2.0 or higher, but will run with "reduced functionality" on older systems. FinalCalc takes up 5 MB of hard disk space, and cannot run from a floppy disk. FinalCalc uses several system libraries such as the AmigaGuide library (on line help) and the ARexx

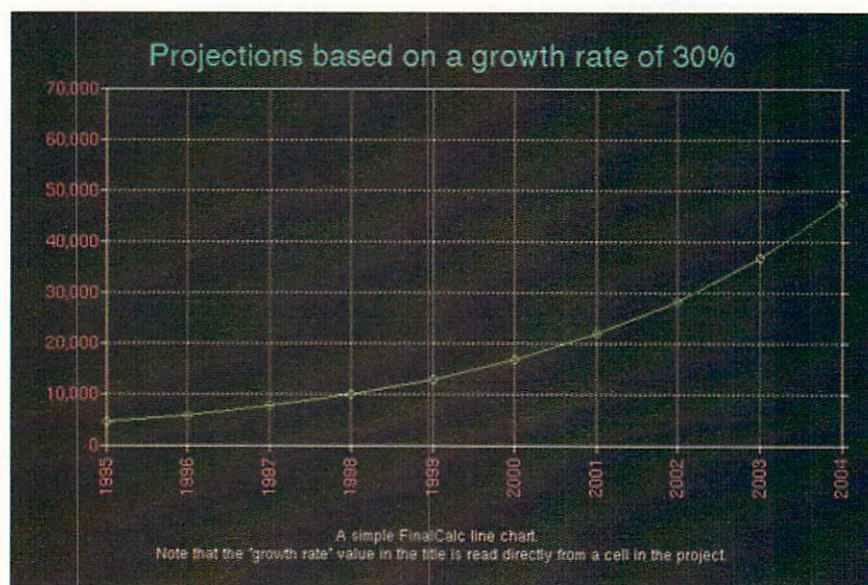
library (for macros). FinalCalc also installs effortlessly with the standard Commodore Installer program.

## A Quality Amiga Spreadsheet

Historically, there have been several ill-starred Amiga spreadsheet programs. Various earlier attempts were either buggy, litigated into oblivion by Lotus, or otherwise unsatisfactory. It has been somewhat of a joke that the Amiga could do "anything except spreadsheets", which are one of the staple applications on other platforms. The last Amiga spreadsheet I tried was Pro Calc by Gold Disk. Pro Calc was quirky, poorly documented, and the ARexx interface was irritatingly buggy.

At last, Softwood has developed a major product to capitalize on the absence of a quality spreadsheet for the Amiga. A spreadsheet is a mathematical model builder and problem solver. The user defines a set of variables, data, and formulas, and how they interrelate to each other. Then the spreadsheet calculates the effect on the entire model if one or more entities change or are updated. Spreadsheets are good for "what if" or experimental scenarios, as well as for keeping track of business data such as sales, expenses, tax information, and so forth. Graphical representation of the figures has also become standard.

A FinalCalc project, as in other spreadsheets, is made up of "cells"





which are arranged in numeric rows and alphabetic columns to make the "view" or "sheet" which is one page of the project. A cell is identified by its coordinates. A1 therefore is the upper left hand cell of a view: Column A, row 1. A "range" of cells is a rectangle encompassing one or more cells. Ranges may be copied, cut, and pasted as well as given names. Projects may have multiple pages and formulas associating or connecting their cell ranges. Cells may be "formatted" in several "types" including general (general purpose), decimal (e.g. 1.23), currency (e.g. \$1.95), comma (e.g. 10,245), and so on. Cells may contain justified text, data, or formulas. Cell addresses or ranges may become variables in formulas. A cell formula begins with the equals sign (=); for instance if the contents of some cell is to be the sum of cells A1 and A2 then its content is represented as:

$$=A1+A2.$$

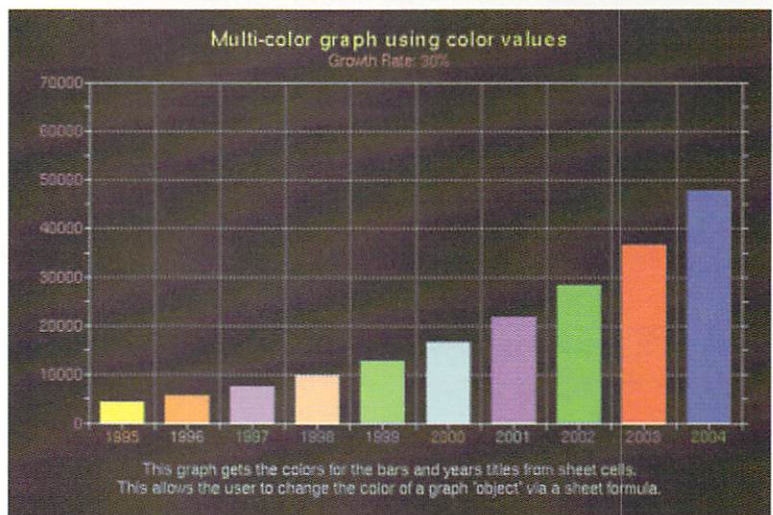
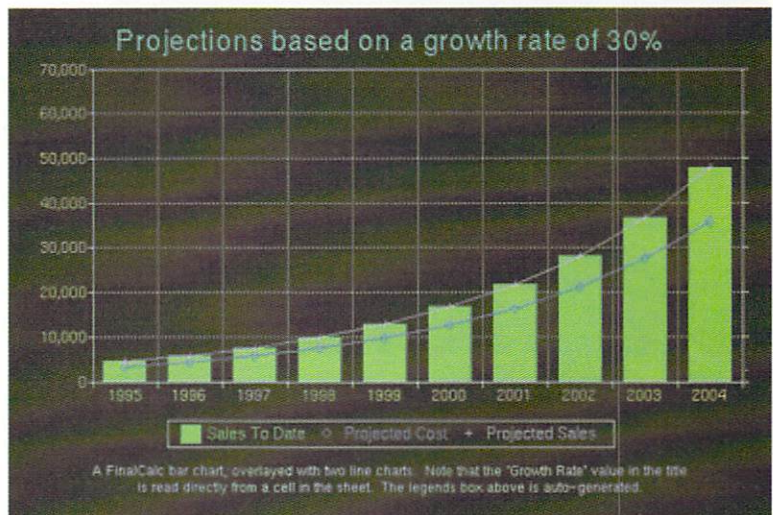
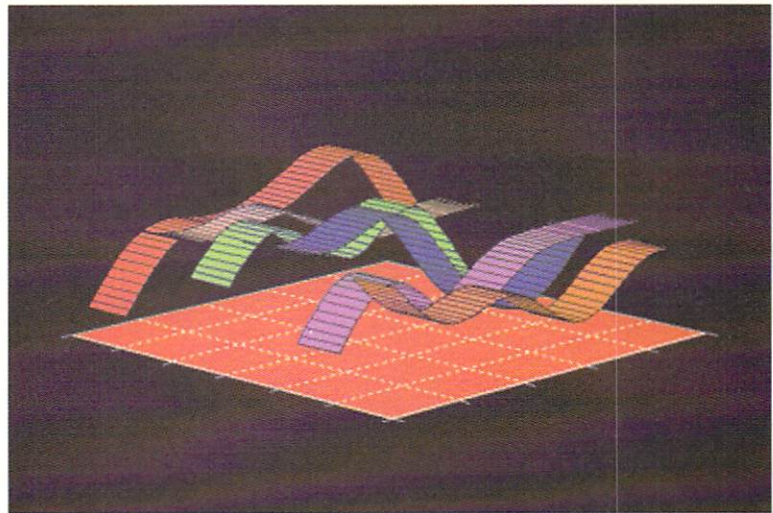
The cell in question appears highlighted if you begin typing. FinalCalc enters "Edit" mode and what you type appears in the edit area at the bottom of the screen. Pressing Enter inputs what you typed to the cell, and, depending on what format or type is set, and whether this is the result of a formula or just data or text, the results appear in the cell.

A status line at the top of the screen shows the actual contents of any selected cell. For instance a line:

G2: (C2) =A1+A2

shows that cell G2 is formatted in Currency type with 2 decimal places, and is the sum of cell A1 and A2.

In these basics, all spreadsheets are very much alike. The real power of any particular product relates to how easy it is to set up and modify a spreadsheet. This calls for, among other things, an intuitive interface, scripting or macro capability, key-stroke alternatives to mouse clicks, ability to fill a range with data, graphing capabilities, cloning of all settings for some particular range so they may be called up for use by another range (these cloned settings



are called "tags" in FinalCalc), easy printing, drawing, and printing capabilities.

FinalCalc has all these and more, including naming and sorting ranges, outline font support, PostScript or

preferences printing, date parsing, regression, database functions, on-line hypertext help, the ability to undo/redo events, full ARexx support, and even animation of its graphs! Since Gold Disk has lost interest in the

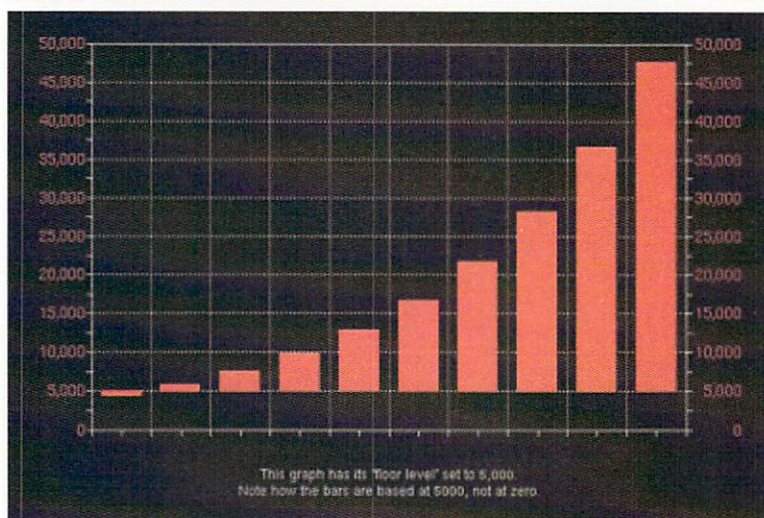


FinalCalc Thursday, 12 October 1995 12:11  
 FinalCalc:Projects/Demo sheet: Demo Sheet  
 F13: (02) = (13) - (011) \* (1) \* (1215) - (0515)

Midwest Sales Projections: 1995 To 2001

Year	Quantity	Cost	Shipping	Sales	Net Profit
1995	25	2,423.75	131.25	4,388.00	-1,855.88
1996	30	2,458.88	178.63	4,388.00	-1,855.88
1997	122	5,486.14	221.81	7,485.88	487.75
1998	134	6,726.29	234.86	7,485.88	487.75
1999	273	12,112.14	317.22	16,280.12	1,289.22
2000	401	16,483.12	433.27	21,224.25	2,255.25
2001	612	22,928.38	578.62	26,787.88	2,789.66
2002	795	36,367.15	1,391.84	47,728.25	8,427.25

Unit Cost 545.63  
 Shipping Cost 31.75  
 Sales Price 568.00  
 Yearly Growth Rate 38%  
 Fixed Costs (yearly) 62,000



FinalCalc  
 FinalCalc:Projects/Macros Test sheet: Sheet A  
 B15:

Hit F1, Alt-F1, F2, F3 or F4 to run a macro.

Demonstration of the use of ARexx scripts in FinalCalc:

Script 1:	Script 2:	Script 3:	Script 4:	Script 5:
cell a1 store 100	cell a1 blank cell	cell a1 do i=1 to 5 store i end	quiet on range "a1:a5" cell a1 do i=1 to 5 format decimals 3 store i/3 end quiet off	blank range

Macros List...

Edit Macro...

Macro Name	Command	Hotkey
Final Script	Alt+F1	F1

Execute as:  
☒ ARexx  
☐ Internal

Command Source:  
☐ 1. Sheet Range  
☐ 2. String Command  
☐ 3. External File

Hotkey:  
☒ Enable  
☐ Set Hotkey

When to Run:  
☐ After Recalc  
☐ After Save  
☐ After Load

Internal Only:  
☐ Before Recalc  
☐ Before Save  
☐ Before Close

Timer:  
☐ trigger every 00:00:00  
☐ Enable  
☐ Set Timer

Buttons: Use, Reset, Cancel

Amiga, there does not exist another competing Amiga spreadsheet, yet Softwood has marketed FinalCalc as if they were up against the stiffest competition. This level of effort and commitment to excellence deserves every success.

## Demo Projects

Since FinalCalc's manual is several hundred pages, I do not have space to discuss or even enumerate all of its features, but let's walk through a few of the supplied demo projects to get a feel for FinalCalc. These working

examples are the best place to start learning FinalCalc's features.

The Calendar sheet demonstrates the considerable power of FinalCalc to manipulate dates both as strings and as numeric data. It also showcases its line drawing features. The user may input the month, year and first day of the week (e.g. does the calendar start on Monday or Sunday?). A calendar is generated for that month. The other sheet (viewable by pressing Alt-S) shows the entire year.

Named ranges are used in formulas to make calculations easy. To view/edit the named ranges in a sheet, press Alt-N or use the Edit menu under Names. Named ranges used in formulas may themselves be composed of results from other calculations.

The Macros Test Sheet demonstrates several internal script macros. A macro may be written into a range of cells and then assigned a hotkey to activate it. FinalCalc has a set of internal commands that work only within a project, and it has ARexx capability for controlling logic as well as communication outside the project.

The macro requester lets you choose Internal or ARexx. It also lets you choose the macro's source as a range of cells, as an external script file, or as a string command. The set of internal commands are transparent to ARexx (they may be used either as internal commands or as the ARexx command set). There are facilities to identify objects, such as project windows; requesters to get information from the user (you can also send commands to requesters from a macro); a macro recorder; and an event trigger to run a macro after a certain event such as a recalculation, or according to a user-settable timer. The scripting capabilities of FinalCalc are exciting to say the least. Softwood has gone all out to create a state of the art tool that is long overdue in the Amiga community.

FinalCalc has full graphical rendering capability as well, as



demonstrated by the Demo Graphs Sheet. There are 40 types of graphs that you can view, print, or modify based on a data spreadsheet. When viewing a graph, right click to get a menu that lets you save the IFF file (RAMiga-S) or close the view (RAMiga-C). Graphs may be animated. I opened the Animation List from the menu and tried several animated graphs which worked well save one, called "The Worm", which did not animate for some reason (probably a typo in its script).

## Conclusion


The only quibbles I could come up with are that the manual index is a little thin and there is no conversion to/from other spreadsheet formats. Several subjects that I tried to find either are not indexed or listed as subheadings only (for instance Format is only a subheading under Cell). Since you can search for words in the Amiguaguide online help, this is a minor quibble that disappears after a few hours of using FinalCalc.

I give FinalCalc my highest recommendation. It is one of the best products ever developed for the Amiga. It fills a longstanding spreadsheet void at a time when most developers have jumped ship. Softwood risked producing a "boring" business application when most of the Amiga software business seems to be only in video and graphics. Well, I predict that all that video business will soon be tracked via FinalCalc! It certainly stands up to the best of spreadsheets on other platforms such as Lotus 1-2-3, Excel, and Quattro Pro.

On this subject, it would be welcome if Softwood provided a conversion program to convert Lotus 1-2-3, Excel, and Quattro Pro spreadsheet files into FinalCalc and vice versa. That would help to integrate the Amiga into the mainstream business environment (or at least allow one to take work home and load it into FinalCalc). FinalCalc absolutely has no rival on the Amiga, but there is always the larger

question of whether the resurrected Amiga can prosper without inter-platform communication and data sharing. In the meantime, we all should admire (and support) Softwood for steadfastly continuing to invest

their talents boldly into the Amiga which we all know is the best personal computer ever designed.



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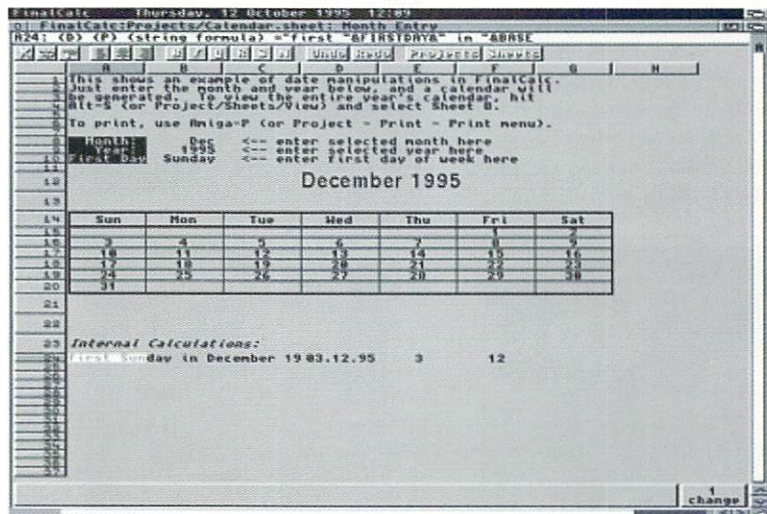







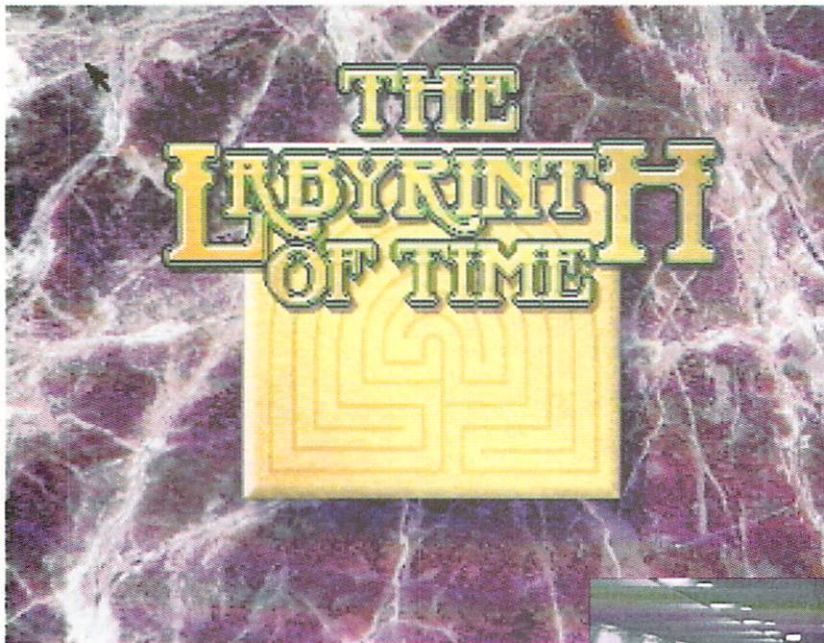
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Very similar and in some ways superior to *Myst*, *Labyrinth* contains exquisitely beautiful screen graphics, fascinating settings and a fantastic storyline.

by Jason D'Aprile

While *Myst* was being heralded as a stunning, revolutionary CD-ROM title, a number of other similar titles were also being created and released at around the same time. Virgin's *The 7th Guest* was most notable, but also Sanctuary Woods' *The Journeyman Project* and Terra Nova Development's *The Labyrinth of Time*. *Labyrinth* being the only one, of course, which was released (and actually developed) on the Amiga. Because *Myst* has moved to virtually every system known to man except the Amiga and *7th Guest* was locked out of being ported to other systems except PC and CD-I due to a very premature



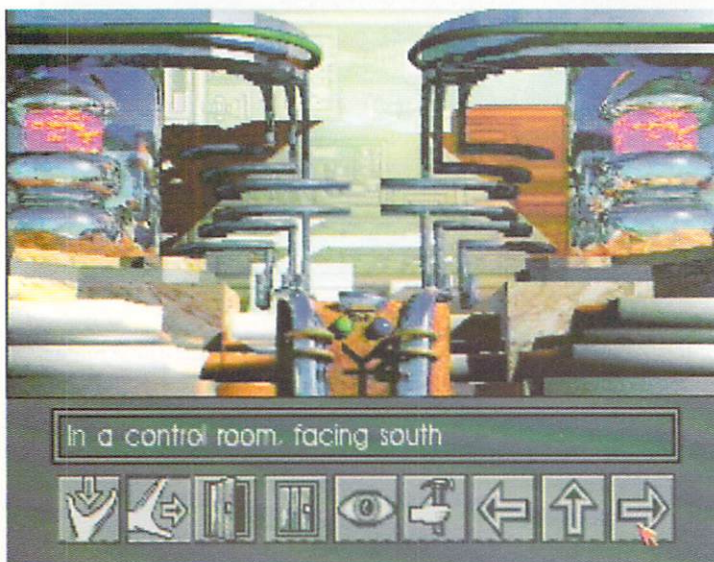
deal with Nintendo (for their never to be released Super NES CD add-on), *Labyrinth* still stands alone in the midst of Amiga CD software. After almost two years, there is still nothing like it on the CD-32, or Amiga.

Very similar and in some ways superior to *Myst*, *Labyrinth* contains exquisitely beautiful screen graphics, fascinating settings and a fantastic storyline. Totally unlike *Myst*, *Labyrinth* is completely icon driven, with an items inventory, a north, south, east, west travel

system and an excellent auto-mapping feature. Since *Labyrinth* uses standard HAM mode and is unmodified for the AGA chipset, it can be played on the CD-32, or any Amiga with a CD-ROM.

*Labyrinth* has an incredibly powerful, mysterious, and moody soundtrack that matches the game perfectly. Which is ironic considering that Terra Nova bought the music from a place that apparently just sells musical scores to whoever wants to buy them. Sound effects are all digitized and sound authentic as well.

The game can be played with the CD-32's control pad, or the mouse (which is much more favorable) and control is quite intuitive. *Labyrinth* saves to the CD-32's save RAM (the bookmark option in the save menu), or to floppy and it is in NTSC mode. The game is rather slow, even on a double speed drive, but not detrimentally so.





Like *Myst*, *Labyrinth* does not scroll, but instead produces screen updates when you turn toward a new direction or move to a new area. It is a beautiful, surrealistic slide show, but with interactivity. While scrolling would have been much more preferable, the spooky, isolating atmosphere comes through unmistakably thanks to both the graphic quality and the music.

*Labyrinth's* storyline is one of the best ever put into a game and develops all through the game. You are an everyman leading a mediocre grey life, lamenting on your boring, stolid lot in life when a mysterious apparition appears before you as you are boarding the subway home. The ghost is Daedalus, the greatest architect of ancient Crete, and he needs your help. He has been forced by the evil King Minos to build a Labyrinth unlike no other—a labyrinth that spans both time and space. He tells you (through text, unfortunately, not speech) that you must find a way to destroy the labyrinth and end Minos' insanity. The secret lies somewhere in the labyrinth and it is up to you to find it.

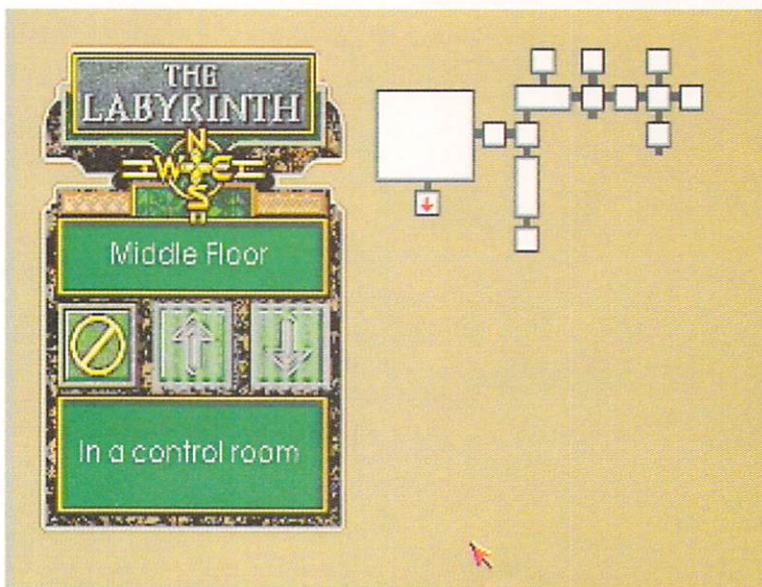
The labyrinth contains areas that range from a 50's diner, a space station, a Crete temple, an old west town, a circus maze, and more. Through these strange realms, you will find all sorts of puzzles to solve that will lead you to the final secret of the Labyrinth. There are no monsters to fight in the game, no real treasure to gain, no traditional role playing game character elements. *Labyrinth* is an adventure game, or, more specifically, a game of exploration. And on that level, it works well because of its visual and audio presentation and great storyline.

Where *Labyrinth* trips up, however, is not so much in the difficulty of the puzzles, but in its unbelievable propensity for red herrings. So many items you will pick up in the game are absolutely useless—more are useless, in fact, than useful. The puzzles range from easy to hair-pulling challenging and, unlike *Myst* and unfortunately, you can get yourself irreversibly trapped in certain ways.

Still though, given its unique status on the Amiga, it is hard to fault the game too much for its shortcomings. Frankly, while it may be the same on any type of Amiga, *Labyrinth* is the only true CD only Amiga game—even though it was one of the first games available for the CD-32. A sad fact, if there ever was one, but it is still a good game.

The *Labyrinth of Time* is definitely not for everyone. The slow pace, hard puzzles, red herrings, and deep, involving play time make it a perfect pastime for those who have patience and enjoy an atmospheric, mysterious gaming experience. If nothing else, the stunning, near photo-realistic, computer generated graphics are excellent for showing off the graphic abilities of the Amiga.

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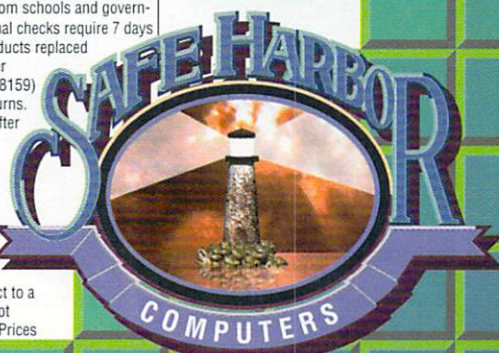
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# Family Connections

by R. Shamms Mortier

## Family Connections allows you to turn your family stories and information into a genealogical database.

I remember the surprise I had when a friend, a Professor of Library Sciences at the University of Montreal, looked up my ancestry. She did it because my name, Mortier, is of French heritage, although my Grandfather was a "Waloone" from French Belgium. I had always been curious about my name and who else might have worn it. I had always connected the name "Mortier" with the Latin "Morte", a rather morose reminder of death and dying, figuring that my past ancestry included either an executioner or someone on the receiving end of the axe.

But not so! Mortier, as it turns out, is a derivative or "Mortar", the alchemists bowl that holds the elixirs. As for my friend's more direct search of the Mortier name, she ran across the interesting fact that there was one Adolphe Mortier who was at one time the duke of war under Napoleon, a rather dubious position

since he was relieved of that post by the little emperor himself.

### What to do about the facts you gather

So I, like you, have a wealth of memories of ancestors I have met during my sojourn here, and more facts about those from hundreds of years ago. My children are interested, as their children will be, in all of the facts that can be gathered about their heritage. Our heritage helps define us and allows us to have some sense of who we are.

When you find out these facts, you could grab some paper and pen them down. If your desk and storage rooms are anything like mine however, no matter how hard you promise yourself to never forget where you put things, in no time at all your paperwork will head for the Sargasso Sea of lost information, never to be seen again. Now it is time to

realize that in addition to those fancy graphics and animations you have been creating on your Amiga, you have at your fingertips an excellent filing system for all of that word stuff that was in danger of being lost to you forever.

With the help of Family Connections, the new genealogy recording software from Legendary Technologies, not only can you make sure that genealogical data is stored properly, but you can also add and revise that data when the mood hits. Printouts are available for members of the family with a click of the mouse.

### The Family Connections Interface

Family Connections is really a specialized database program. If you have any experience with entering records in a database, the operation of this program should be second nature to you. This specialized database does have its own conventions, however, and it expects those conventions to be followed in order that it might generate understandable reports (Last Name, Comma, First Name for example).

The software is able to maintain the following information for each person entered in the database: Name, Marital Status, Spouse(s), Birthplace, Birthdate, Location, Mother, Father, Children, Sex, Date of Death, and an index to other biographical information. The edit field that accepts this data is clearly defined, and there should not be much reason to use the manual at this point.

For convenience sake, the data entry requester can be used as a global field so that entries for relatives close to each other can be simplified. When new information not connected to the present

The screenshot shows the 'Family Connections' software interface. At the top, a window titled 'Sample family' displays a list of family members. Below this, an 'Add person' form is open, allowing the user to enter details for a new individual. The form includes fields for ID, Name, Sex, Date of birth, Marital status, Living status, Note, Place of birth, Location, Father, and Mother. The 'Add person' form is currently filled out with the following information:

ID:	28	Date:	1995 Oct 3
Name:	Serge Montrose		
Sex:	<input checked="" type="radio"/> Male	Marital status:	<input checked="" type="radio"/> Married
Date of birth:	1458 July 11	Living:	<input checked="" type="radio"/> No
Place of birth:	Spoonberg, Switzerland		
Location:	small cabin on the Freeg River		
Father:	Bligamesh		
Mother:	Freida		

At the bottom of the form are buttons for 'OK', 'Reset', and 'Done'.

Figure 1. The interface for Family Connections is straightforward and easy to maneuver around in.



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entry is needed, a "reset" function clears the data for new entries. Data entered may be deleted (like ex-premier Kruschew's name from Russian street signs) at your whim.

When the data gets large and complicated, you may want to find a name tucked away in some arcane corner of your listings only to be thwarted by your memory of exactly where it is. At that point, Family Connections allows you to access a "Person Finder" requester.

There are radio buttons here waiting for your input. "Partial Name" allows you to enter some discernible fragment of the name in question, while "Exact Name" is for those who know the exact spelling of the name being searched. A scrolling display of similar names might be the answer to the partial input and selecting the exact name from the list, sets you on the way. You can also find listings by calling up a person's ID number.

When it comes to expanding the listings to include more than the basic data, Family Connections brings up a

"Listing Options Selection". Here, you may enter personal or spousal information, and in what order it is listed (alphabetical or ordinal). All options may be listed to a file, the printer, or the screen. A special "Notes" file can be attached to any person's name.

### Report Generation

Family Connections allows you to generate some very specific reports. A Ahnentafel report lists the person and all of their ancestors. A Pedigree report shows three generations of the person's parental ancestors. A Descendancy report shows all of the descendants of the selected person, including their ID numbers and the dates of their birth. A GEDCOM report gives you everything available. At this juncture, Family Connections allows no editing of a GEDCOM report. Output sent to the printer can be configured as either landscape or portrait dimensions. Users can personalize Family Connections by reconfiguring its Tool Types and/or by changing its palette.

### Feedback

Legendary has done an excellent job by providing the basic elements for genealogical record keeping. In a coming upgrade, I would ask that the interface be designed a little more pleasingly to take advantage of the 3D look as opposed to being so text oriented. Something I would also request, though I admit this is a personal wish, is a list of phone numbers (or maybe even fax numbers) for a selection of foreign embassies or consulates, and perhaps another similar listing for State government record keeping facilities. This would really be helpful in tracking down missing parts of the genealogical puzzle. None of this takes away from the fact however that this software does what it is supposed to do, and it is unique in what it does on the Amiga.

Family Connection version 3.2:  
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# Feedback

## Letters to the Editor

Dear AC,

I'm pleased that the Amiga has a direction and that Amazing Computing is still around to pass out road maps when the signposts up ahead indicate "under construction." I hope to see an update to the AC Guide in the near future. I especially enjoyed the July Feedback letters from Mr. Kuzawa and Mr. Hehr. You can count on my continued subscription to Amazing Computing.

In spite of the Commodore Debacle, my outlook for the Amiga's future remains positive. I want to wish ESCOM all the very best. I really like the new logo. ESCOM's decision to create Amiga Technologies will help distance the new Amiga line from the bad taste left by Commodore Inc.

I believe that there is still a viable North American Market for Amiga Products and Services. I am a member of the AmiCosmo Amiga Users Group of Santa Maria, California and the owner of an A1200 and A2000 system. The A4000; while an upgrade for me, is still outdated technology and more expensive than its Pentium cousins. I do intend, however, to purchase a RISC Based, "AAA" Amiga 5000 Work Station when Amiga Technologies R&D personnel get serious. Allow me to digress for a moment while I aim a few "slightly negative vibes" to the new owners.

What Do You People Think You Are Doing???

What's with the New A4000 Tower pictured on the July Amazing Computing cover? Apart from the fact that Commodore only built around 1,000 Towers—was there something wrong

with them? Why do you feel the overwhelming need to redesign the wheel, thereby generating "Ramp Up Costs," when the problem has always been publicity and availability? A few questions:

A.) What's the oversized, perforated thing on the Tower case—Is it a filtered air intake or is it a "high quality" 3-inch speaker? I hope it's not a speaker, because if it is, the logic of spending thousands to achieve transistor radio sound is beyond me. Is the Tower flip out/down door an old C64 Cassette Tape Loader or is it a CD ROM? It looks like the CD on my kids Boom Box. Who manufactures it and what speed is it? Please don't tell me that it's a single speed drive cannibalized from your surplus of CDTV's and CD32's.

B.) Why can't someone produce an Amiga with a Front Panel Keyed Power Switch? I don't know about you people, but my Amiga 2000 has an entire forest of cables behind it complicating easy access. Seems to me that I've heard this complaint about every Amiga model ever produced!

C.) Is this new Tower compatible with any currently available model of the Video Toaster, or will New Tek, yet again, be tasked to retrofit the Toaster? Considering past problems with the A4000, and the fact New Tek is now producing a Windows Compatible model, would they even bother? While you were reengineering the A4000, did it occur to anyone to allocate a Plug-In Slot for easy Chip Memory expansion?

D.) How many half/full size Expansion Slots does this Tower offer? How many

half/full size Drive Slots does this Tower have? Where are they located? Are there any visible indications of drive activity? Is the Power Supply internal or external? What is its wattage rating? You people didn't redesign the Zorro Slots with Metric dimensions—did you? I had hoped that ESCOM would be more responsive to customer input.

E.) All of your existing Amiga Stock utilizes older generation processors and should be sold at or below cost to seed the user base. I've always felt that poor marketing and limited availability caused the prices on the Amiga Line to remain artificially high as dealers tried to recover their investment. To invoke the "INTEL" word, no one is going to buy 286's at Pentium prices even if a 286 is all their computer needs require. The Amiga Market is no different. Take a look inside any Computer Shopper Magazine for a glimpse at your competition. It is critical to stop the erosion of your user base. You have to stimulate interest among Software and Hardware Developers. You have to demonstrate that Amiga Applications are superior or you need to begin porting popular applications (i.e., Word Perfect or Quicken) from other platforms. It's essential that you revitalize the Amiga Dealer Network. You have to pay more than lip service to Amiga User Groups.

F.) Produce every new A1200 with a 50 MHz EC68030. Eliminate the PCMCIA slot in favor of Zorro Slots and a SCSI Interface. My idea of a new and improved A1200 most closely resembles an A1200 Mother Board inside an A2000 Chassis and a separate keyboard. I think that an expandable A1200 in the



\$1,000 range would satisfy the computing needs of 95% of us and sell well.

G.) When possible, every A4000 should ship with a 100MHz MC68060 or Power PC. The Top of the Amiga Line should be a no holes barred, fully expandable work station. Professionals and Power Users will come up with the \$3,000 to \$5,000 for genuine state of the art technology. Personally, I still really like my Accelerated A2000 and don't envision a new purchase until I start seeing MC68060 or RISC Based "AAA" architecture. Halfway measures and repackaging of old technology like Commodore did with the A3000 will be the death of the Amiga. You won't even be able to give them away.

H.) Finally (sorry gamers), I'm just not into spending thousands to play computer games. Is there any indication that Commodore actually made any money on the CD32? I can get into 64-bit gaming if I wish with Sony, Sega or Nintendo for considerably less than the cost of a CD32 system modified to emulate an A1200. Trying to compete in the game market with the CD32 is a Lose/Lose situation. Lose this albatross and concentrate on producing computers.

Enough questions, how about some answers? Thank you again for pointing the Amiga down the road of progress. Try not to steer into a Cul De Sac.

Yours Truly,  
Martin E. McKeever

Mr. McKeever,

*We have placed your complete letter in this issue. We have also forwarded a copy to Amiga Technologies. With a few points aside (Amiga Technologies did come back later and announced that they were not going to produce the Amiga tower pictured and that they had only proposed the design), you have asked the right questions.*

*Our understanding is that the released Tower will be exactly as before (some say too much like before). These units should work well with the Toaster and the flyer as well as other Amiga peripherals. However, your questions do raise some points which Amiga Technologies has been slow to address.*

*From the first, we have received less answers than we would have liked concern-*

*ing the Amiga, its production, and its development. This may be due to our association with Commodore, but it is more likely that Amiga users have waited sometime for answers and have little patience. The Amiga needs worldwide support. This was true before Escom made their purchase and it is still true today.*

Dear AC,

I ordered and very promptly received a crystal track ball from Amicom Technology, an advertiser in your July 1995 issue. The track ball is cool; a red and green light emitting diode colorizes the clear center ball. It has a lock down for the left mouse button to ease the coordination problem of rolling the ball while holding the left button.

I added a Radio Shack 276-624a micromini toggle switch (using my pencil soldering iron as a drill) on to the right button so menu items can be selected with the same minimal effort.

This is especially useful to one Amiga user who has cerebral palsy; I ordered a second ball for myself, donating the modified one to her. We had built her a supermouse two years ago complete with left and right button lockdowns from a discarded mouse, clock parts, and duct tape. It looked more like a rat than a mouse, but it functioned. It is failing now and hopefully the modified track ball will see her for two or more years to come.

Thanks to Amicom for their part and to your magazine for helping to keep the Amiga "store" open.

Richard L. Collins

Dear AC,

Yesterday I bought your magazine and a copy of Bytes' 20th edition. I've got an A500 and have been watching the smaller computers evolve from 4 bits until today's PC market. As you know, it's been a real dog fight and some people have enough clout to drive the North American market in circles if they wanted to. The Amiga has been more or less driven underground. What they should do then is adopt a stance similar to National Public Broadcasting's educational, informative, but above all, quality approach to the market. It's not

Christmas but this thing is a masterpiece.

Thanks.  
Dave Danner

Dear AC:

This is the first time I've written to any magazine. But I wanted to let you know I've been reading Amazing Computing for several months now, and enjoy it very much. I've looked back through your synopsis of past editions and have a question regarding information and/or lack thereof. Regarding accessing the internet using one of the faster Amigas, bits of information can be gotten word of mouth, and I've just been told of a new book.

Everyone seems to assume that everyone else out here knows exactly what to do, and how. Well I may be one of the few who are still ignorant on the subject. Every service I speak with is Mac and IBM oriented, a lot haven't even heard of the Amiga. Would it be possible for an article or series of such, regarding the subject? Perhaps entitled Internet for Idiots. Thank you for listening to my rambling, and have a nice day!

Sincerely,  
George Koppert

*Rob Hays began a series about the internet in his column On-Line in the last issue. Perhaps the pace is not as quick as it should be. We will do our best to get you more direct information in future issues of AC.*

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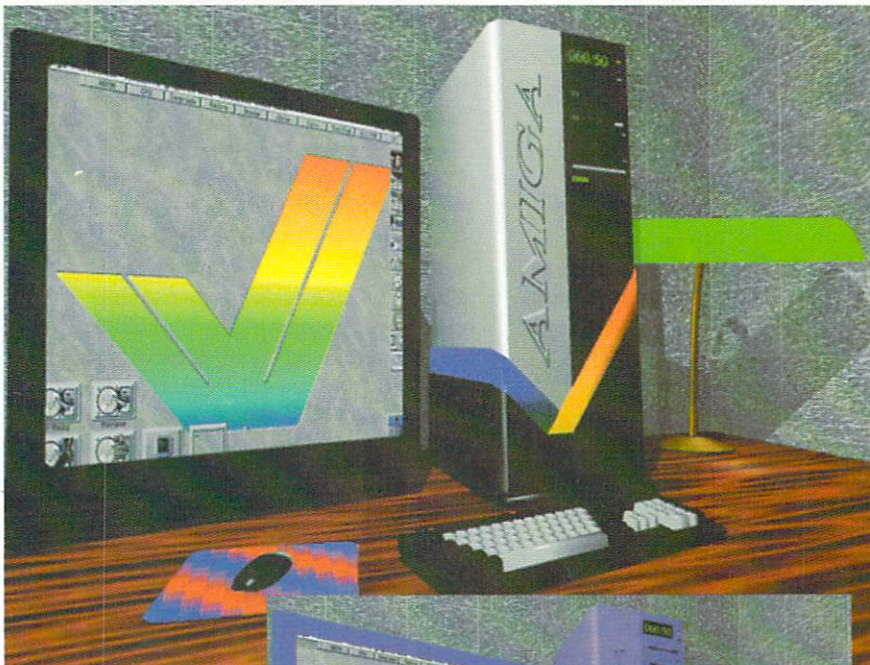
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# And furthermore...

## Alternative Amigas

**Don't like the new Amiga designs?  
Why not create your own?**



**Artistic Amigas  
by Dave Matthews**

What should a new Amiga Tower look like? Some artful Amiga users were not impressed with Amiga Technologies' initial Amiga 4000 Tower designs and began offering their own.

Dave Matthews of McCook, Nebraska has created a different look for the Amiga platform. The black and silver is his original design. The purple Amiga is the "Asha Develder" version. Mr. Matthews created it when Asha, an Amiga artist who "hangs out in cyberspace," expressed a desire for a purple Amiga.

Now that Mr. Matthews has gone on record to show what he thinks a new Amiga should look like, how about the rest of us? There are more artists per capita on the Amiga than on any other platform. Now is the time to show your stuff.

Send your best rendering in JPEG or tiff format to:

Amiga Design  
PiM Publications, Inc.  
P.O. Box 2140  
Fall River, MA 02722

While there are no prizes, however, we will forward the best examples to Amiga Technologies as well as display them here and on our new Web site (still under construction). Good luck and do your best. Who knows, you could design the icon of computing for the next millennium.

All entries will remain the property of the artist. PiM Publications Inc. maintains the right to exhibit the renderings in both printed and electronic form as long as the artist's name is enclosed. If Amiga Technologies shows an interest in an artist's design, the artist will deal directly with Amiga Technologies. PiM Publications wishes to see the best and most outlandish ideas expressed by our readers while attempting to maintain some sense of order. If you want your submission returned, please include a self addressed stamped envelope.



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